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The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

Published Every Thursday TULSA, OKLAHOMA, OCTOBER 6, 1927 $6.00 a Year

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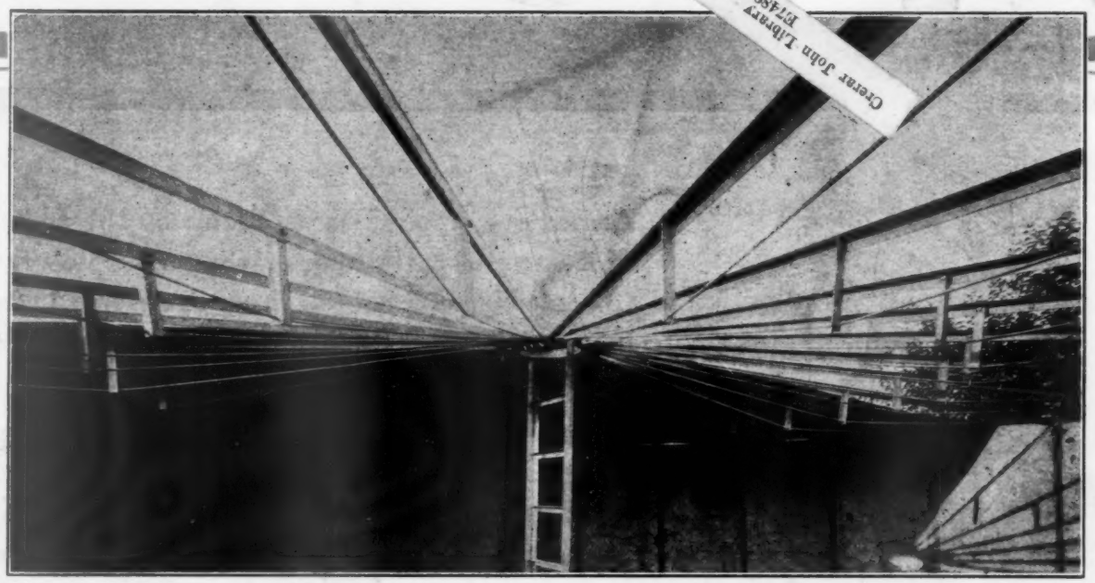
MADE OF KEYSTONE COPPER STEEL



MADE OF KEYSTONE COPPER STEEL

MALONEY'S NEW 5,000 BBL. AND 10,000 BBL. TANKS MEET A. P. I. STANDARDIZATION REQUIREMENTS

The Maloney Tank Mfg. Company is pleased to announce that MALONEY Bolted Steel Tanks are now being manufactured in 5,000 Bbl. and 10,000 Bbl. sizes.

Ever since MALONEY pioneered the "bolted steel tank" idea, in 1912, it has been recognized that this type of tank, due to its ease of erection, portability, and remarkable durability, represents by far the most economical form of field storage obtainable. The new sizes make this economical equipment available for volume storage.

The photograph shows a 5,000 Bbl. MALONEY Tank in course of erection. Note the double rows of bolt holes at seams, and the heavy cantilever construction of the 26 deck supports. Side seams are reinforced with rigid steel double-channels. All bolts are ½" and are our new specially oil heat treated bolts of 80,000 lbs. tensile strength. Bolt holes accurately punched, obviate delays and annoyance in erection.

The new sizes meet A.P.I. standardization requirements in every respect. For further particulars and quotations address

"Alone in Quality"

MALONEY TANK MFG. COMPANY
Tulsa, Okla.
Distributors at All Principal Petroleum Points

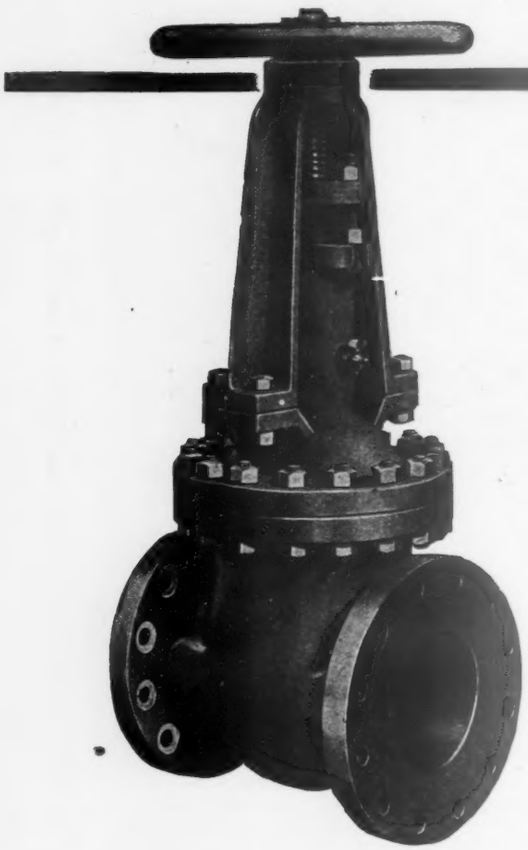
Howell Aluminum "3-in-1" Vacuum Pressure Valve and Thief-Hatch—The BEST and LATEST Deck Equipment—POSITIVE Safety

Sizes: 12 to 3,000 Barrels Packed in Steel-Bound Crates for Export

MALONEY PATENTED BOLTED COPPER-STEEL TANKS MALONEY

Advertisers' Index on Page 25 Table of Contents on Page 26

Impregnable!



Armed at all points, unassailable by the enemies of leak-proof performance, Chapman Valves of Chrome Nickel Steel (stronger than forged steel) have long proven their quality under the most severe conditions of refinery service.

Chapman Chrome Nickel Steel is the result of years of painstaking laboratory research to perfect process and material. The design and workmanship of every Chapman Valve are the best that experience and modern equipment can produce.

These are the factors which have made Chapman Valves selected refinery equipment.

Chapman Refinery Valves, Drilling Valves, Pipe Line Valves, are stocked close to you for immediate shipment.

The Chapman Valve Manufacturing Co.
Indian Orchard, Mass.

Branch Offices:

New York
Boston
Chicago
Cleveland
Detroit
Houston
Atlanta
Tulsa
Syracuse
Pittsburgh
Philadelphia
San Francisco
Los Angeles

Distributors:

E. L. Wilson Hardware Co., Beaumont and Houston
Wagner Supply Co., Fort Worth

CHAPMAN VALVES

Linde can help you to stop the "*oxygen leaks*"

MORE than you realize. You sit down and study oxygen prices before you buy it. A few cents loom large in your eyes at that time. Then, when oxygen is shipped in to your storehouse, you probably forget all about it.

For one thing, you forget the oxygen valve in the top of the cylinder. It is the watchman of your oxygen supply. The Linde oxygen cylinder valve has a double seat. It prevents leaks whether it is open or closed. A glance at the diagram will show you why.

But more important still is the waste of oxygen in use. Linde service develops the most efficient and economical use of oxygen by every customer. Linde service men can show you how to conserve oxygen by proper process control. Linde procedure controls are detailed instructions for carrying out welding and cutting operations. They describe economical welding methods. They are free to Linde customers.

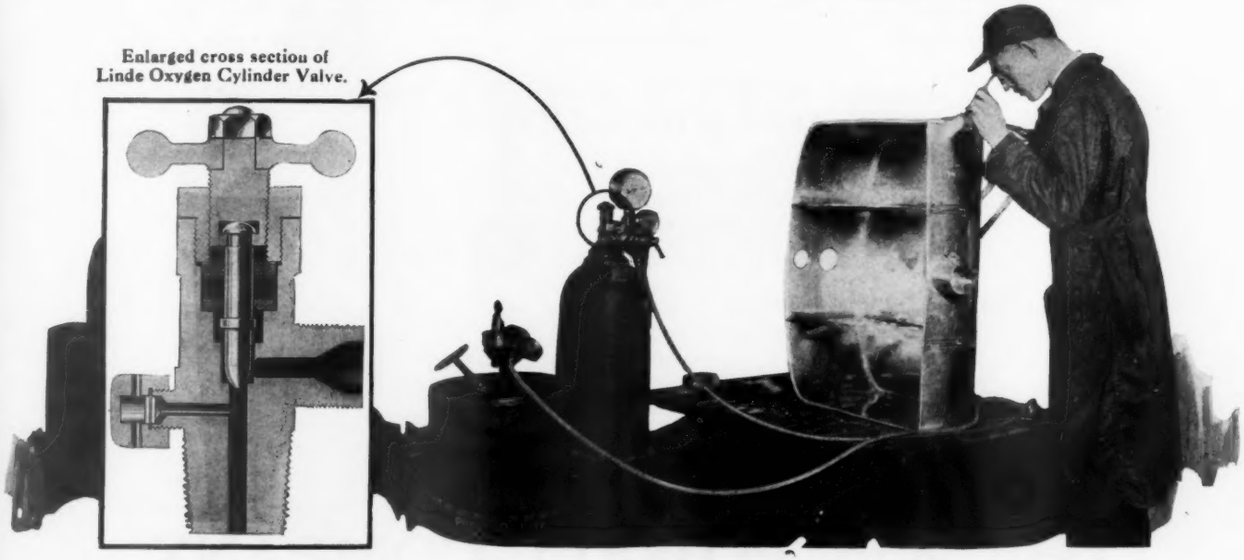
THE LINDE AIR PRODUCTS COMPANY
Unit of Union Carbide and Carbon Corporation

UCC

General Offices: Carbide and Carbon Building
30 East 42d Street, New York

37 PLANTS . . . 107 WAREHOUSES

Offices on the Pacific Coast—San Francisco—Los Angeles—Portland—Seattle



LINDE OXYGEN

The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription price $6.00 a year; 15 cents a copy. Entered as second-class mail matter December 15, 1911, at th e postoffice at Tulsa, Okla., under the Act of March 3, 1879

A Large and Complete Stock

.....of.....

POWELL VALVES

Fig. 190
Iron Body, Bronze Trimmed,
Irenew Valve
Sizes ¼ to 3-inch

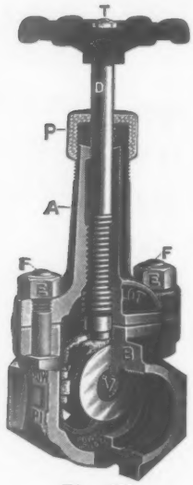


Fig. 460
Iron Body, Bronze
Trimmed, Pilot
Gate Valve
Sizes ¼ to 6-inch

Fig. 102
Bronze Renewable Seat and
Disc White Star Globe Valve
Sizes ¼ to 3-inch

CARRIED AT ALL STORES OF THE FOLLOWING OIL WELL SUPPLY DISTRIBUTORS:

Continental Supply Company
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San Antonio Machinery & Supply Co.

Geo. T. Bloom, *Export Representative*
25 Broadway, New York City

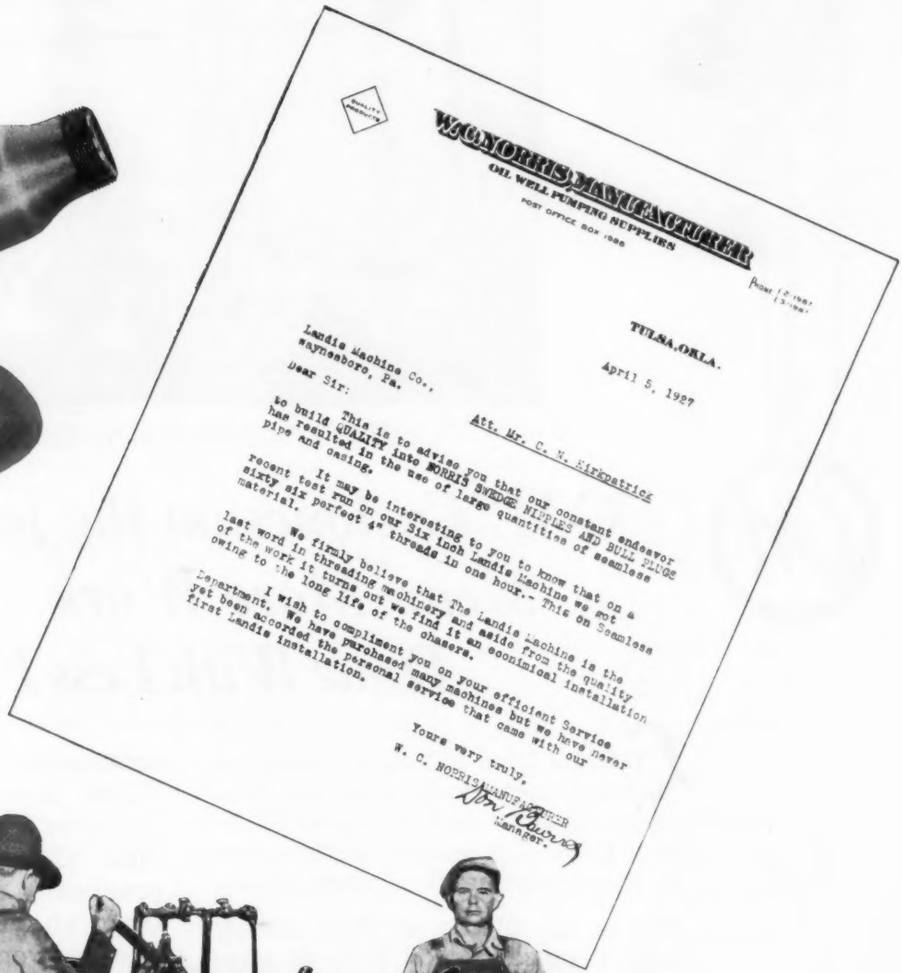
THE Wm. POWELL COMPANY

2521-2531 Spring Grove Ave.
Cincinnati Ohio

LANDIS—"The Last Word in Threading Machinery"—Ask Mr. Bowers

More Landis-Cut Threads are used in the Oil Fields than any other.

LANDIS TRADE — MARK



W. C. NORRIS, MANUFACTURER
OIL WELL PUMPING SUPPLIES
POST OFFICE BOX 1566

TULSA, OKLA.

April 5, 1927

Landis Machine Co.,
Waynesboro, Pa.

Dear Sir:

Att. Mr. C. N. Kirkpatrick

This is to advise you that our constant endeavor to build QUALITY into NORRIS SWEDGE NIPPLES AND BULL PLUGS has resulted in the use of large quantities of seamless pipe and casing.

It may be interesting to you to know that on a recent test run on our Six Lock Landis Machine we cut sixty six perfect 4" threads in one hour.- This on Seamless material.

We firmly believe that The Landis Machine is the last word in threading machinery and aside from the quality of the work it turns out we find it an economical installation owing to the long life of the chasers.

I wish to compliment you on your efficient Service Department. We have purchased many machines but we have never yet been accorded the personal service that came with our first Landis installation.

Yours very truly,
W. C. NORRIS MANUFACTURER
Manager.

LANDIS MACHINE COMPANY, Inc., Waynesboro, Pennsylvania

Detroit Office: 5928 Second Blvd.

A "C-M" Cyclone High Speed Chain Hoist and Matchless Timken Bearing Trolley at the United Oil Company, Long Beach, Calif.

No effort and only a minimum of time required with a "C-M" Electric Hoist

"C-M" Cyclones on the Job Mean More Work Done With Less Effort

LOOKS like a heavy piece of machinery, doesn't it? It is. But one man is lifting it easily with a 5-ton "C-M" Cyclone while the other is manipulating the crane chain.

There are plenty of these heavy jobs around the oil field or anywhere, for that matter, where there's work to be done. With "C-M" Cyclone Hoists and "C-M" Matchless Trolleys, these hard jobs are made easy, take less time, and require less labor. It's because "C-M's" are profit makers that you'll find so many companies in the oil and gas fields standardizing on them.

Where these heavy lifting jobs are continuous, you'll find the "C-M" Electric Hoists the greatest labor savers. One "C-M" electric hoist practically always means from three to ten men released from material handling for other more productive work.

A "C-M" material handling expert is in the oil fields at all times—specializing on oil-field material handling. You'll find his suggestions result in quicker, cheaper handling of all materials. He'll come anywhere, at any time, at your request. Or write for catalogs and complete information.

Get a CM *Idea*

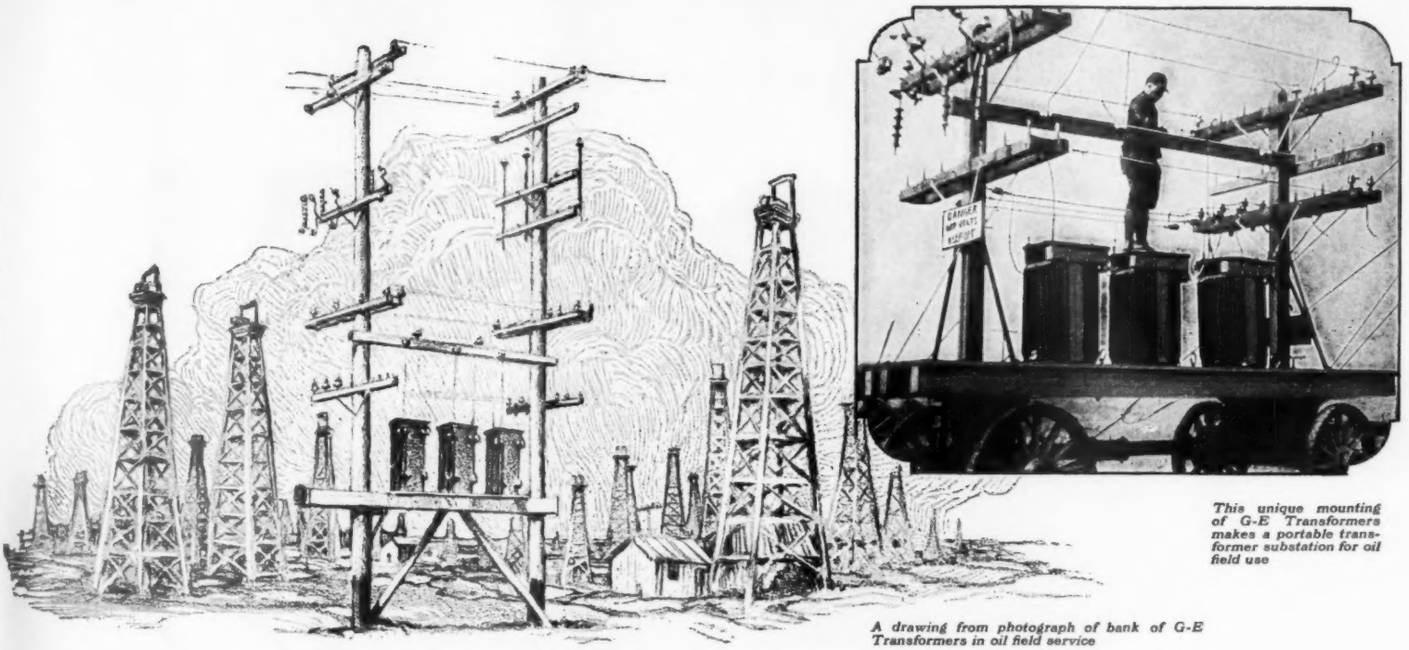
THE CHISHOLM-MOORE MFG. CO. · *5020 Lakeside Ave., Cleveland, Ohio*

Branches: New York, Chicago, Pittsburgh

All Leading Oil Supply Jobbers Stock "C-M" Overhead Material Handling Equipment

CHISHOLM-MOORE

CHAIN HOISTS — CRANES TROLLEYS CUPOLA CHARGERS — ELECTRIC HOISTS



This unique mounting of G-E Transformers makes a portable transformer substation for oil field use

A drawing from photograph of bank of G-E Transformers in oil field service

Where Transformers Supplant Boilers

On an increasing number of leases the old steam boiler plant with its costly delays, complicated piping, and other disadvantages is giving way to more modern equipment.

Today, G-E Transformers, in compact banks, as pictured here, take electric current from incoming power lines and distribute a dependable supply to the motorized field equipment. They require no attention, suffer little depreciation, present no fire risk, and are easily installed.

General Electric's position as a builder of equipment for transmission and distribution is unique. Not only can G-E Transformer Products be supplied for every normal requirement, but a service is available to study any special problem, and, if necessary, develop the equipment required to deliver reliable power in suitable form.

General Electric supplies complete electric equipment to the oil industry. With warehouse facilities close to your operations, G-E readily furnishes motors, controllers, transformers, arresters and other protective devices, capacitors for power factor improvement, switching equipment, etc.

G-E oil field specialists and G-E service at: Dallas, Denver, Houston, Kansas City, Oklahoma City, Tulsa, Los Angeles, San Francisco.

GE Transformer Products
— the Standards of Quality

401-14

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, SCHENECTADY, N. Y., SALES OFFICES IN PRINCIPAL CITIES

Controlled Quality

EXACTLY to specifications—demands control from well to finished product. There is no other way.

Pure Oil's own premium grade crude, six refineries, pipe lines, tank cars, telegraph lines insure quality—precision in specification—through and through.

Not a single detail is left to chance.

Pure Oil quality is always the same, always supreme because—always controlled. Phone, write or wire.

"ALL PETROLEUM PRODUCTS"

THE PURE OIL COMPANY
U. S. A.

Independent—and successful, through unvarying high quality in all its products.

Sales Offices

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HEATH, OHIO
MARCUS HOOK, PA.
CABIN CREEK JCT., W. VA.

COMMANDS A PREMIUM PRICE — CABIN CREEK — OVER ALL OTHER CRUDES

LONG WEAR-

Guiberson cups are made of the most durable composition ever developed for swabbing purposes. They will swab for weeks in high gravity oil without deterioration. They often show little wear after running hundreds of miles in swabbing.

Being flexible, the cups yield readily in passing obstructions. Imbedded wires guide their edges safely past projections and pipe ends, eliminating trouble and expense with torn rubbers.

Because the GUIBERSON is *economical* as well as supremely *efficient*, it does the greater part of the world's swabbing. Fully patented.

"Better Be Safe Than Sorry"

THE GUIBERSON CORPORATION
Box 1106, Dallas, Texas
CALIFORNIA BRANCH: 1506 Santa Fe Ave., Los Angeles
402 W. First St., TULSA
321 S. Osage St. PONCA CITY
506 Trust Bldg., NEWARK, O.

Type "A"

Type "E" Production Swab

GUIBERSON

BETTER BE SAFE THAN SORRY UIBERSON

PARKERSBURG
Rig Irons
Including Common,
California
and A. P. I. Standard
☐
PARKERSBURG
Steel Wheels
☐
PARKERSBURG
Steel Derricks and
Steel Crown Blocks
☐
PARKERSBURG
All Steel
Standard Rigs
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PARKERSBURG
Portable
Drilling Machines
Wood and All Steel
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PARKERSBURG
Chain Driven
Sand Reels
and Bailing Reels
☐
PARKERSBURG
Bolted
Steel Tanks
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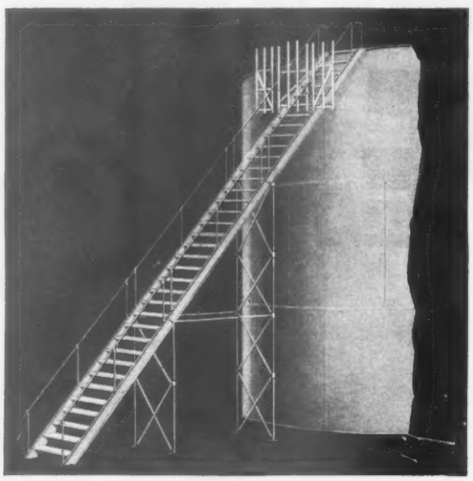
PARKERSBURG
Miscellaneous
Drilling Equipment
☐

Check the equipment in which you are interested, tear out and return this page to us, and we will send complete information.



Safe · Easy to Erect · Portable

BUILT from structural steel shapes, these steel stairways are strong, fireproof and safe. They are shipped knocked down, with the parts nested. Ordinary wrenches are the only tools required to erect them easily and speedily.

Component parts are bolted together and the entire assembly may be easily dismantled for removal to a new location.

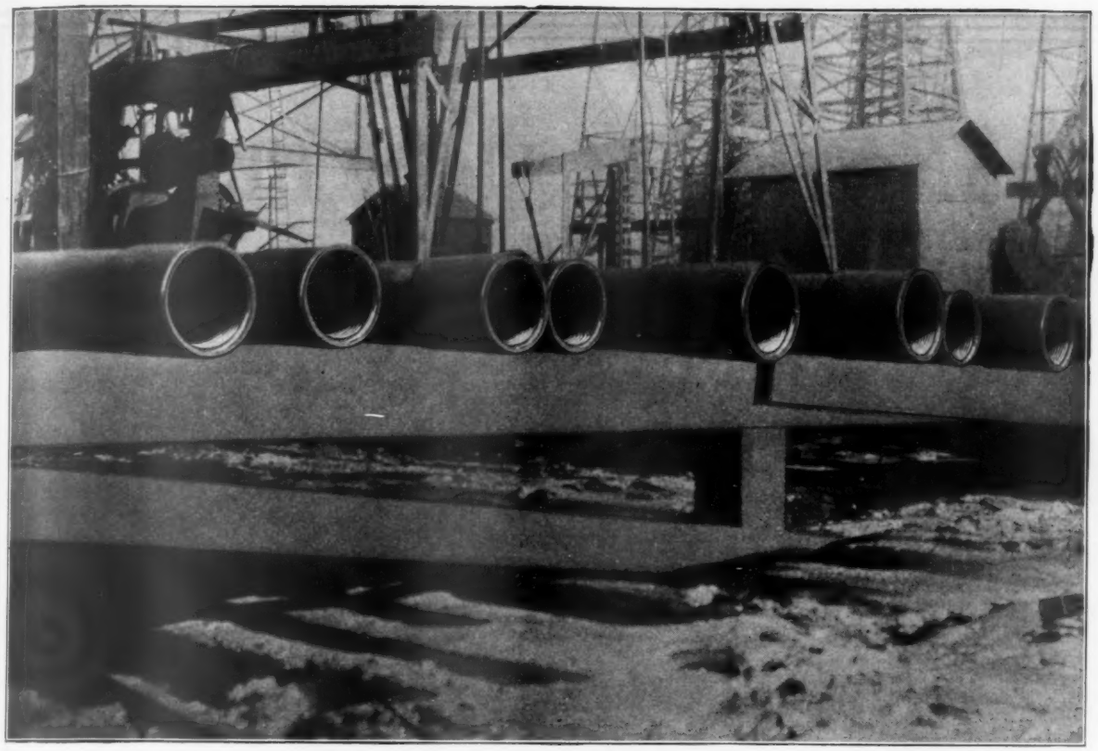
Parkersburg Steel Stairways are adapted to various sizes of oil field, tank farm, pipe line and refinery tanks. Detailed specifications on request

THE PARKERSBURG RIG & REEL COMPANY
QUALITY
PARKERSBURG
SERVICE

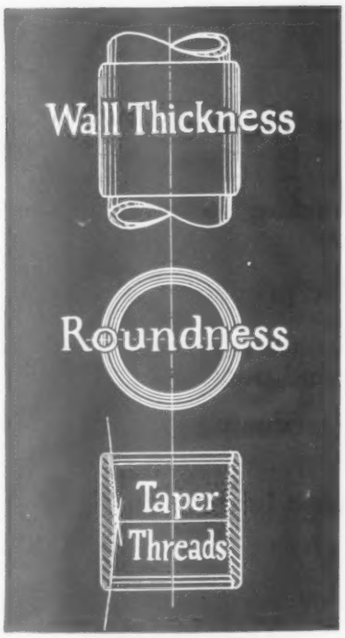
The Parkersburg RIG & REEL COMPANY

Main Office and Works, Parkersburg, W. Va.

Sales Offices and Stocks Carried in Every Producing Field



ACCURATE



UNIFORM

You Can Now Use Every Joint Without Worry As to Fit

Many pipe mills now furnish pipe equipped with Smithsteel Couplings.

With pipe thus equipped you will be free of the difficulties caused by lack of interchangeability.

Every Smithsteel Coupling is interchangeable with any other Smithsteel Coupling of the same specification.

Every Smithsteel Coupling is cut to Briggs' or A. P. I. standard, and the standard is unvaryingly maintained.

Every joint of pipe equipped with Smithsteel Couplings is interchangeable with any other joint of pipe so equipped.

Every oil producing department will appreciate the advantages of stocks of pipe that are completely interchangeable.

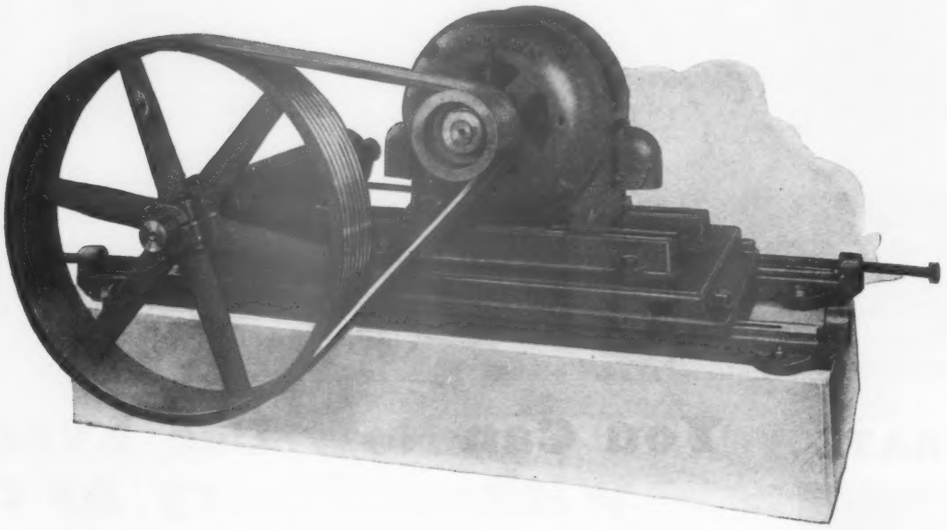
We will gladly furnish any information that you desire.

A. O. SMITH CORPORATION
Coupling Division—Milwaukee, Wis.
508-509 Mid-Continent Bldg., Tulsa, Okla.
1701 Magnolia Bldg., Dallas, Texas
633-634 Oliver Bldg., Pittsburgh, Pa.

SMITHSTEEL COUPLINGS

The Standard of the Oil Fields for Reconditioning Pipe

A Countershaft Unit That Eliminates Belt Clamps



Base on slide rails with enough movement to take up all the stretch in the longest belt.

Texrope is flexible, will not slip, and is now successfully working on the heaviest wells.

Motor Sheave or Belt Pulley can be easily changed to give proper pumping speed.

Large rugged oil well motor designed to meet unusual conditions.

Thorough insulation process insures successful operation, reducing shut-downs.

Large roller bearings on motor and countershaft, grease lubricated, require little attention.

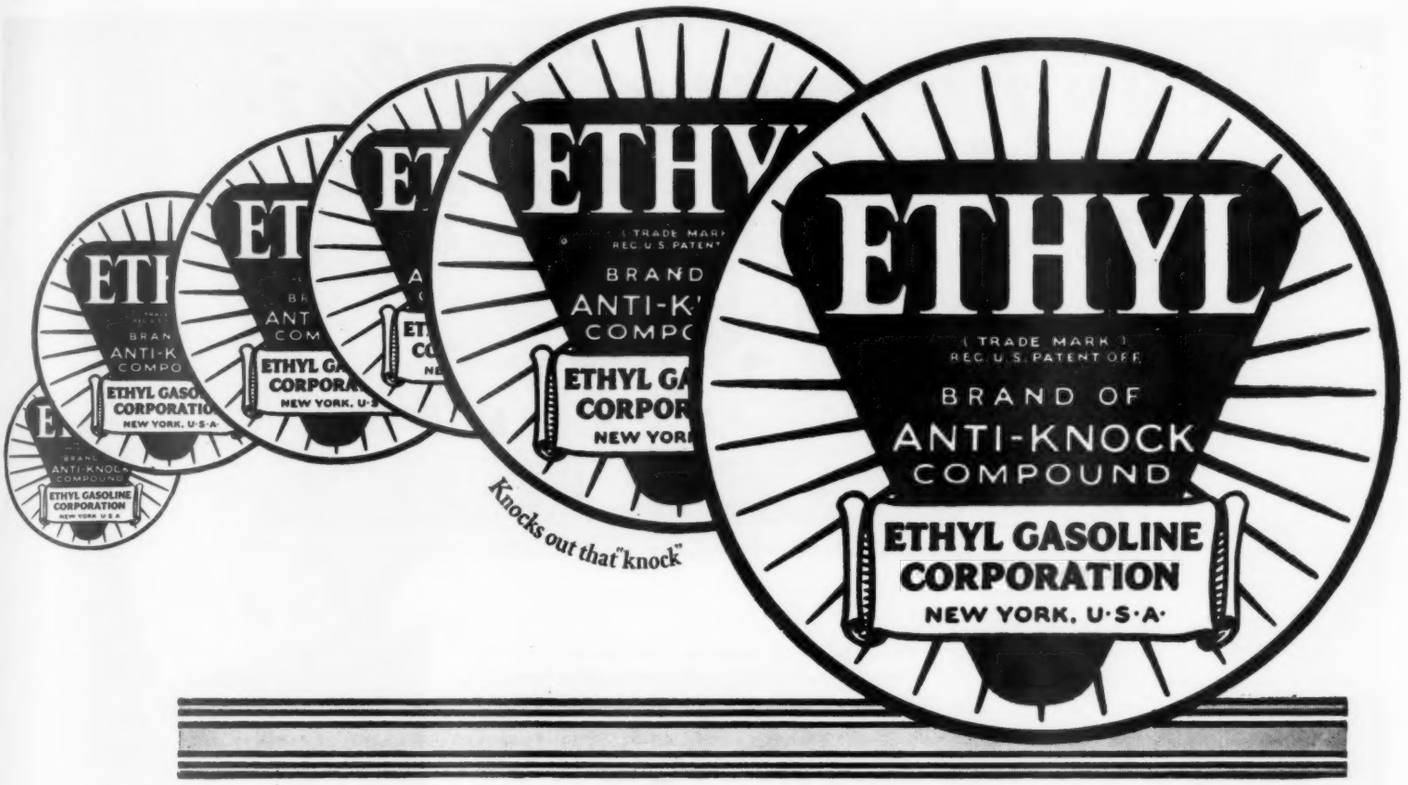
See Bulletin 1231

Allis-Chalmers Manufacturing Company

MILWAUKEE, WIS.

DALLAS	KANSAS CITY	DENVER	SAN FRANCISCO
HOUSTON	NEW ORLEANS	LOS ANGELES	EL PASO

AND ALL OTHER PRINCIPAL CITIES



Reasons for riding with
ETHYL GASOLINE

You have heard and read much about "anti-knock" (high compression) fuels . . . how they increase motor performance . . . "Which one," you may ask, "is best for my car?"

Hundreds of thousands of car owners now answer . . . ETHYL GASOLINE.

Large oil companies and their jobbers answer . . . ETHYL GASOLINE.

And you yourself, after trial, will answer . . . ETHYL GASOLINE.

These are the reasons

1. Ethyl Gasoline is regarded by leading automobile and fuel engineers as the outstanding "anti-knock" motor fuel.

2. It is standard for "anti-knock" rating by prominent oil companies.

3. It has no harmful effect whatever on the motor or its parts.

4. It has made possible the new high compression engines and cylinder heads now being introduced.

Ride with Ethyl today

Find out for yourself its advantages. Note the elimination of "knock" . . . added power on hills . . . faster pick-up . . . lessened gear-shifting . . . cooler motor . . . all-round increased performance. On sale throughout the United States and Canada at pumps which display the "ETHYL" trademark.

ETHYL GASOLINE CORPORATION, 25 Broadway, New York City

An increase of 40% in elastic limit and 150% in fatigue resistance
JONES
New Steel
SUCKER RODS
From the above facts, you can see for yourself that the Jones New Steel Sucker Rods have the greatest margin of safety against wear and tear over any steel sucker rod yet produced—bar none.
This remarkable extra strength has been accomplished by the use of a new, high test steel developed after three years of critical research by the world's oldest steel sucker rod manufacturers.
Added to the great advantages of this super-steel sucker rod is the perfectly forged box and pin.
This does away with just one-half of the joints in a string, and saves you much time and labor in stringing.
Thus in Jones New Steel Sucker Rods you get the greatest strength, simplicity and the greatest all around dependability. Now we ask—what more could you desire in sucker rod performance?
The S-M-JONES COMPANY
Toledo, Ohio.
602
WRIGHT BLDG.
TULSA, OKLA.
TABLE OF SPECIFICATIONS
Size Rod 5/8" 3/4" 7/8"
Pin 15/16" 1 1/16" 1 3/16"
Collar 1 3/8" 1 1/2" 1 11/16"
Square 15/16" 1" 1 1/16"
The Largest Exclusive Manufacturers of Sucker Rods in the World.
ALSO MADE IN OUR FAMOUS GIANT DOUBLE PIN—WITH THE

If it's worth drilling ~ it's worth protecting

You can't tell a good valve by merely looking at it,—it might be nickel trimmed to look like a million dollars, yet down under the skin may be hidden defects that cause a break and the loss of thousands of barrels of oil.

The point is, you need a drilling valve that's kerosene tested and certified by an independent laboratory organization before being shipped to the oil fields.

Kerotest Valves are the only valves so tested and inspected,—only the kerosene test can reveal those tiny flaws,—only with Kerotest Valves do you get a certificate of inspection showing that the valve has been tested with Kerosene under 3000 pounds pressure.

You get known strength in Kerotests,—specify them and play safe.

Kerotest Manufacturing Company
Pittsburgh, Penna.

Carried in stock and sold by

GRINNELL CO. OF THE PACIFIC
Los Angeles San Francisco

NORVELL-WILDER HARDWARE CO.
Houston Beaumont Shreveport
Fort Worth

OIL WELL SUPPLY CO.
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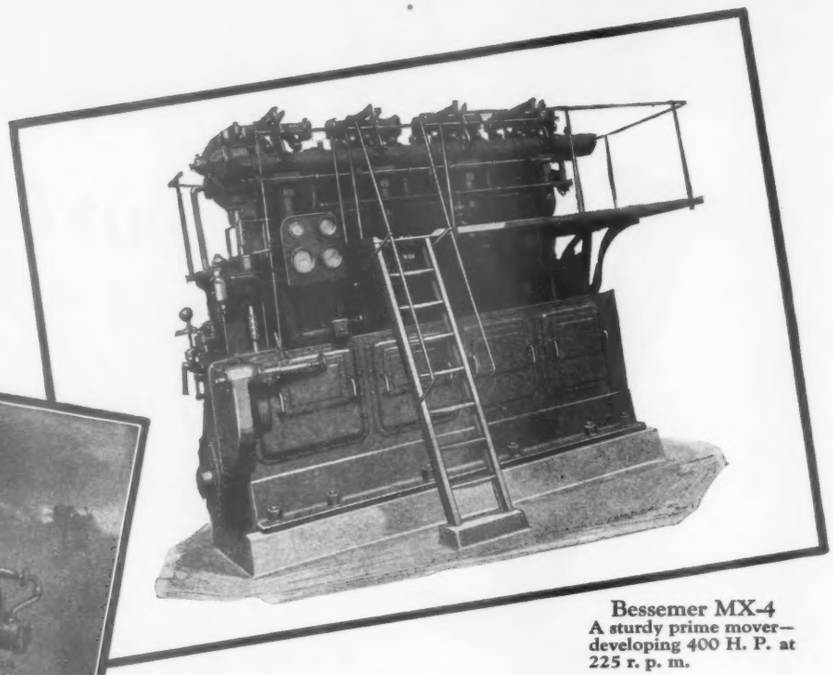
Export Distributors
OIL WELL SUPPLY CO.
Pittsburgh New York Tampico London

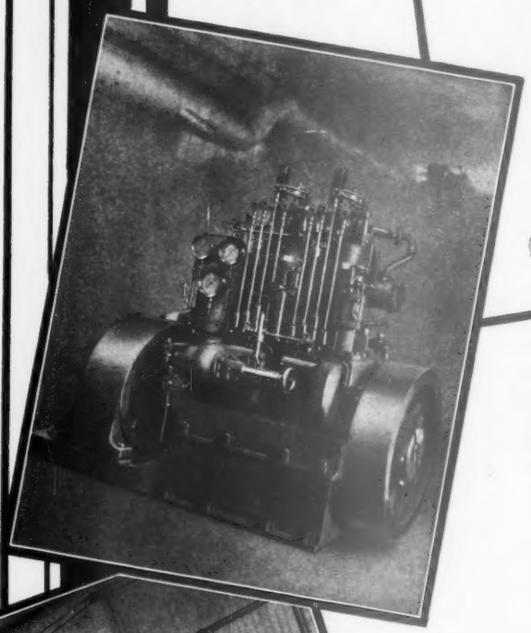
KEROTEST

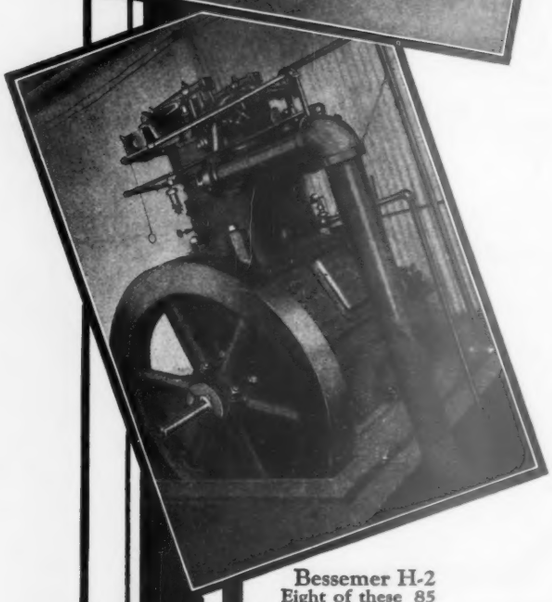
REGISTERED U.S. PAT OFF.



Bessemer MX-4
A sturdy prime mover—developing 400 H. P. at 225 r. p. m.

Bessemer E-2 generating sets are furnished in complete units with solid sub-bases, in units of 25 K.W., 40 K.W., 50 K.W. and up.





Bessemer H-2
Eight of these 85 H. P. Bessemer Deisels are in service as auxiliary engines in South America.

For Pipe Line Work

THERE is a Bessemer Diesel that will exactly fill your needs—whether for main pumping engines, auxiliary pumping engines or generating sets. Bessemer Diesels are of the four cycle solid-injection type and are built in sizes from 40 H. P. to 1250 H. P. with speeds ranging from 200 r. p. m. to 450 r. p. m. Their economy and reliability is the same for all sizes, and their performance is being continually demonstratad by scores of installations of all sizes on all types of work.

THE BESSEMER GAS ENGINE CO.
52 York St. ∴ ∴ Grove City, Pa.

BESSEMER
DIESEL ENGINES

Sunk *in the* Ground

where *corrosion* works unseen

Three coats of pure red-lead most practicable method of protecting buried steel

Buried steel tanks and underground pipe lines should be carefully painted before being buried. The paint should have time to dry thoroughly.

STEEL buried in the ground is threatened by unusual danger from corrosion. The surrounding earth is nearly always damp. Ground water is a constant menace to the metal.

Under most conditions, the most feasible method of protection is a three-coat covering of pure red-lead. Paint made of red-lead adheres closely to steel. It is moisture-proof. It is not affected by the chemical substances ordinarily found in ground water. It offers durable, economical protection.

Where the soil condition is strongly alkaline, of course no paint is suitable. In such a case, the oil vehicle of the paint will be turned to soap.

Protecting buried tanks

Tanks sunk in the ground are sometimes protected as follows: Three coats of red-lead are applied. The tank is then buried in sand, which acts as a filter. In damp soil, a metal tank so treated will last for many years without further attention. In dry soil it will last even longer.

Oil men make this choice

A questionnaire showed that oil men in every field in the United States favored red-lead for metal protection. 53 oil men answered. Thirty-two (or 3 out of 5) are red-lead users.

Dutch Boy red-lead was preferred by many of these oil men. Dutch Boy red lead is pure, uniform in quality. You can get it in either paste or liquid form. The liquid comes in the orange-red for next-to-metal coats and in greens, browns and black for finishing coats. The paste comes in the orange-red and can be shaded to dark colors.

Tanks and tank cars painted in light colors guarantee a large yearly saving in oil. Dutch Boy white-lead is ideal for reducing evaporation losses in this manner. And used over an undercoating of Dutch Boy red-lead it not only cuts your evaporation losses to a minimum, but gives the same weather protection.

We shall be pleased to help you solve any question of metal protection. Our technical staff have made a study of paint for the oil industry. Their knowledge is thorough. Their assistance is free of charge. Address our nearest branch.

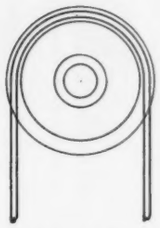
NATIONAL LEAD COMPANY

New York, 111 Broadway · Boston, 800 Albany Street
Buffalo, 116 Oak Street · Chicago, 900 West 18th Street
Cincinnati, 659 Freeman Avenue · Cleveland, 820 West Superior Avenue · St. Louis, 722 Chestnut Street · San Francisco, 485 California Street · Pittsburgh, National Lead & Oil Co. of Penna., 316 Fourth Avenue · Philadelphia, John T. Lewis & Bros. Co., 437 Chestnut Street.

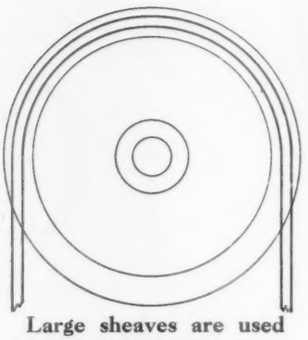
DUTCH BOY RED-LEAD

Feature No. 3

Large sheaves reduce *bending friction*



Small sheaves bend the wire line more acutely than large sheaves and therefore impose strain on the line.



Large sheaves are used for the fast moving lines in the Regan Crown Block, thereby reducing bending action.

Many *new* and *exclusive* features

FEATURE NO. 1.
No side-drag on wire lines.

FEATURE NO. 2.
Lines flare in proper direction.

Watch future advertisements for additional features.

Regan's *new* Crown Block

Write for descriptive literature.

Good engineering theory dictates the use of large sheaves to handle fast moving lines. This not only minimizes bending action of the lines but permits of slower rotation of the sheaves which greatly lengthens the life of the bearings and increases the speed of the Crown Block.

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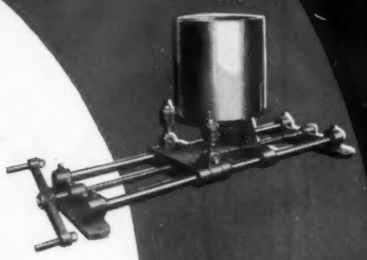
Titusville BAND WHEEL POWERS

There's None Other Like Them



Built like a gigantic bicycle wheel, the Tico Powers incorporate the greatest array of exclusive advantages ever assembled in a band wheel power.

It combines lightness with super strength. It runs with the ball-bearing smoothness of a bicycle wheel assured by the Tico dual oiling system and the Tico long bearing shaft. It has the stiffest rim ever used on band wheel powers maintaining perfect roundness under belt tension.

And there's the Tico belt tightener, which enables you to adjust the heavy belting of 18′ and 20′ Tico Powers with ease. Eccentrics on the hub shaft can be changed without tearing down rim.

Why not check up on its many advantages? See your Continental Man today.

The TITUSVILLE IRON WORKS Co.
TITUSVILLE - PENNA.

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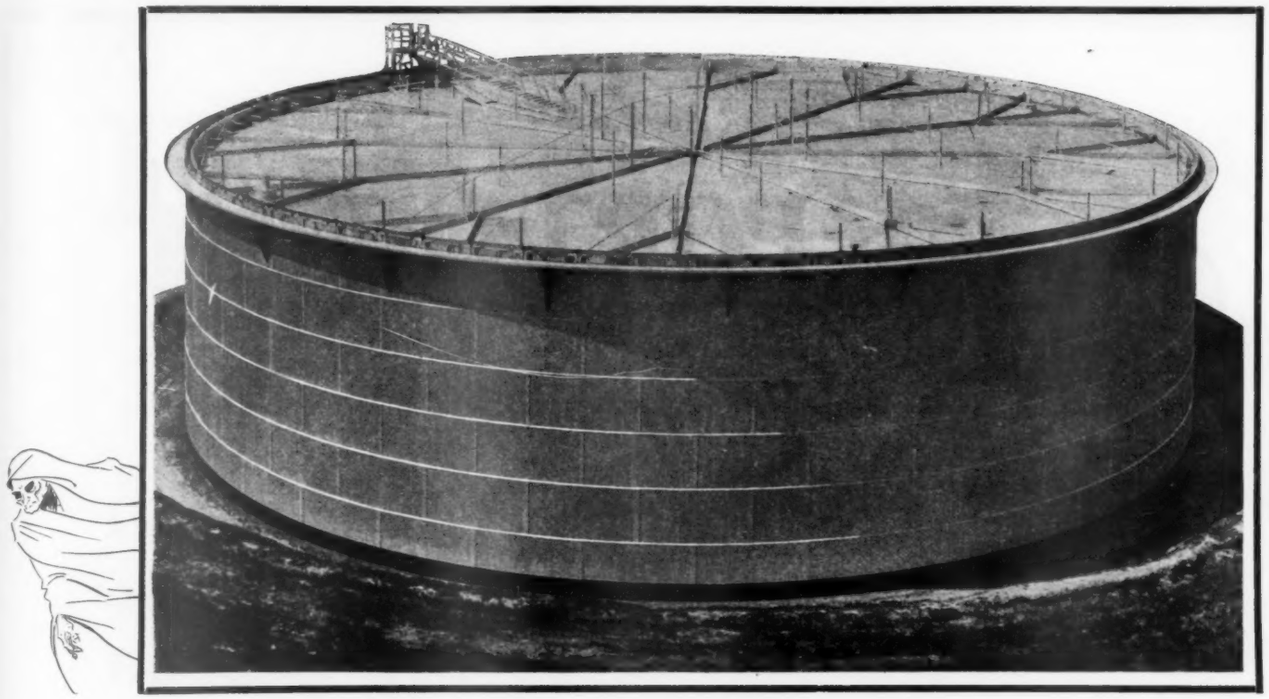

Evaporation Losses Won't Haunt You . . . . . *If You Store Your Oil Under* WIGGINS ROOFS

IT is not pleasant for anyone responsible for the storage or handling of oil to think of the tremendous losses of the most valuable fractions, caused by evaporation.

But you can escape this haunting thought of evaporation losses. Tanks equipped with Wiggins Roofs practically eliminate this loss. The two types of Wiggins Roofs meet every condition of oil storage—the Floating Roof for working storage and the Breather for standing storage.

The Floating Roof

The Wiggins Floating Roof has won its recognition through its ability to keep air away from the oil in a tank. Since it floats on the surface of the oil there is no air space under the roof whether the amount of oil in the tank is large or small.

Evaporation cannot take place unless air is allowed to come in contact with the oil. Even in so-called gastight tanks air saturated with oil vapor passes out the vent when the tank is being filled or when the temperature rises, and fresh air rushes in when these conditions are reversed. This loss is eliminated by a Wiggins Floating Roof. Splashover losses during filling are also eliminated through the provision made for releasing air which enters with the oil in the filling line. Such air passes out through vents in the roof after giving up any entrained oil.

The Breather

The new Wiggins Breather provides a gastight roof which flexes up and down as the vapor expands and contracts. This movement accommodates an increase in volume of the vapor of approximately one-third on an 80,000 gallon tank which is normally ample to prevent any loss whatever. Relief valves are provided for both the upper and lower positions of the roof.

This roof has been thoroughly demonstrated in service and is available for either new or old tanks. Its simple construction fits it for tanks in which oil is stored for long periods.

Fire Hazard Also Eliminated

The same features of the Wiggins Roofs which prevent evaporation losses also eliminate the fire hazard. Fire cannot reach the oil under a Wiggins Roof.

Send for Illustrated Booklets

Our booklet "Stopping Evaporation" fully describes the Wiggins Floating Roof. A new booklet is in preparation covering the Breather. A copy of either of these booklets will be sent on request. Address our nearest sales office.

CHICAGO BRIDGE & IRON WORKS

CHICAGO—2128 Old Colony Bldg. DALLAS—1641 Dallas National Bank Bldg.
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WIGGINS FLOATING *for working storage* **BREATHER** *for standing storage* **ROOFS**

O&GJ 10-6 Gray

IDECO

PORTABLE BELT and ENGINE HOUSES

IDECO Sectional Belt and Engine Houses are universally adaptable for all makes of steel or wooden rigs. They are adequately flashed and made with either galvanized or painted frames to insure long life.

Their ready portability, ease of erection and their fire and rust resisting qualities offer the solution to the building problem that every operator faces.

INTERNATIONAL STANDARD IDECO BUILDINGS (GALVANIZED)

There are a dozen other practical features to these buildings which it will be worth your while to investigate. Drop a line to our nearest branch office and get full details.

Through the use of various size panels the belt houses can be adjusted for use with belt centers from 34 to 42 feet.

Snapshot below shows panels being fitted together. Note how portable they are.

The International Derrick & Equipment Co.

Dallas	Corsicana	*The largest company*	Eldorado	Wewoka
Houston	Pampa	*devoted exclusively*	Tulsa	Denver
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Amarillo	Smackover	*gas and artesian in-*	Seminole	Taft
Borger		*dustries.*		

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National Supply Co. of California
Export Representatives: 74 Trinity Place, New York City, Columbus, Ohio Los Angeles and San Francisco, Cal.

(Snapshots to right) Corners and sidewall joints make weather tight connections without extra flashings.

EXPERIENCE

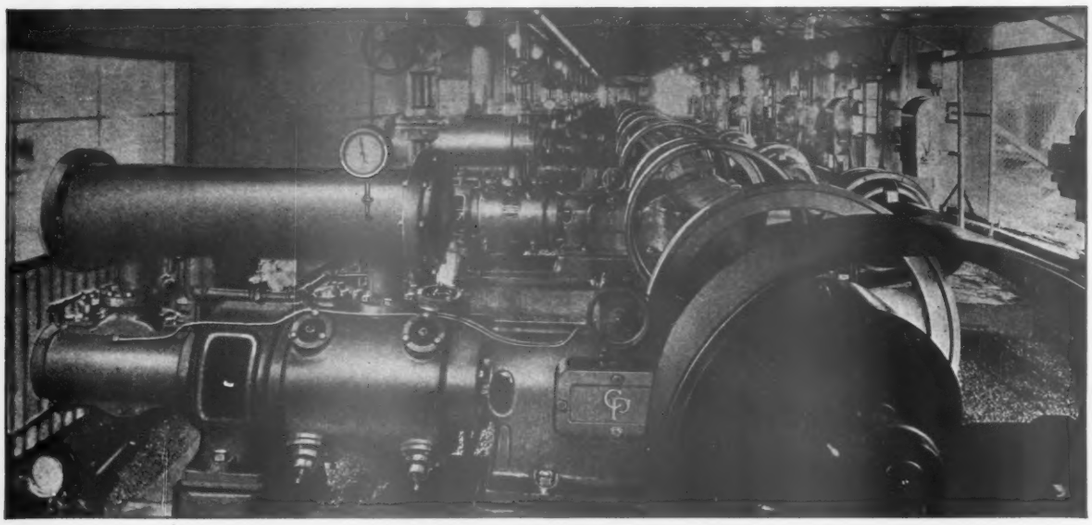
Thirty years experience in making the better kind of oil tools, and up-to-date factory, a patented process, special Alloy Steel and proper heat treatment are all combined in each set of SPANG WELDLESS JARS.

That's why they dominate their field.

SPANG AND COMPANY
BUTLER PENNA.

Sold by All Leading Supply Houses

Patented Oct. 6, 1925—Other Patents Pending



12 CP Tandem High-Pressure Compressors, belted to electric motors for artificially flowing wells in Seminole Field.

CP Compressors for Artificially Flowing Wells

Oil-Field Equipment:

Compressors for flowing wells.
Vacuum Pumps, Condensers and Compressors for refinery service.
Gas compressors for pressure boosting.
Diesel Engines 80 to 450 h.p.
Gas Engines 90 to 540 h.p.
Portable Oil and Gasoline Engine-powered Air Compressors for cleaning wells and tank farm work.
Pneumatic Riveters, Chippers, Caulkers, Scalers, Drills, Reamers and Grinders to handle every job requiring portable tools.

WHEN some 325 CP Air Compressors, Oil and Gas Engines are installed by more than 100 mines within a radius of 50 miles, such as the Tri-State Mining Region, commonly known as the "Joplin District," they've got to be good and backed by a dependable service.

It is not surprising, then, that CP equipment has proved equally successful in the near-by oil fields of Oklahoma. The sterling performance required by the Tri-State Mines is equally essential in the flowing of oil wells—with operating conditions fluctuating widely but always severe. The number of CP Compressors used in this service equals that of all other makes combined. This isn't accidental; there are sound reasons for it.

If you have oil wells to flow, tanks to erect, pipe lines to lay, refineries or extraction plants to equip, let our oil-field engineers confer with you—they have had a wide experience in all branches of the industry.

Chicago Pneumatic Tool Company

6 East 44th Street, NEW YORK, N. Y.

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Canadian Pneumatic Tool Company, Ltd., Montreal, manufacturers of Chicago Pneumatic products in Canada
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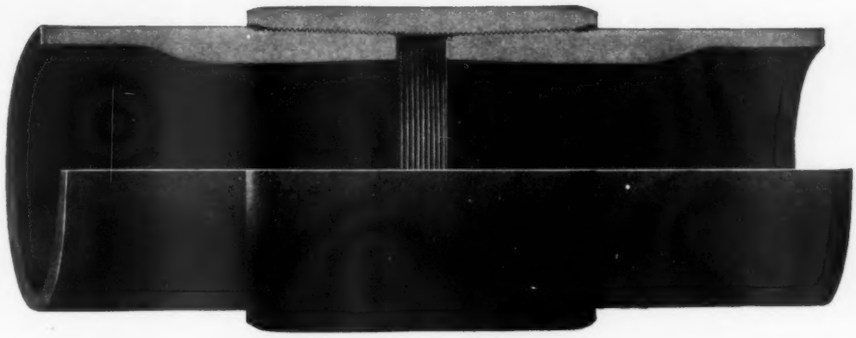
PAINT SPRAYERS · TOOL BALANCERS — PNEUMATIC HOISTS · SAND BLASTERS

CHICAGO *Depend upon* **PNEUMATIC** *that Name*

"NATIONAL"

A.P.I.

Seamless Interior Upset Drill Pipe



Special Features

1. The rounded form of thread, having proved its value in reducing the tendency of the pipe to break off in the bottom of the threads and in eliminating galling, has been adopted by the American Petroleum Institute as standard for Seamless Interior Upset Drill Pipe.

2. The present form of upset is designed with the thickest portion below the root of the last full thread, the point at which breakage most often occurs. The thickness and the length of upset, and the inside clearance of Seamless Interior Upset Drill Pipe have been standardized by the American Petroleum Institute and adopted by National Tube Company as standard practice.

3. The coupling is designed to screw up far enough so that the threads of the coupling completely engage all the full threads on the pipe. This gives a greater area of contact between the pipe and coupling than is true of the ordinary joint, and overcomes the tendency of the pipe to break off at the first full thread.

4. The vanishing threads on the shoulder of the pipe and the vanishing threads at the bottom of the recess of the coupling are cut to the same angle. After the pipe has crept two turns during the process of drilling, these angles will form a bearing secondary to that of the thread tapers. This feature will eliminate the excessive creeping in service, which has been the principal cause of galling on drill pipe.

5. The threads on the end of the pipe are chamfered to the same angle as the vanishing threads at the bottom of the recess of the coupling. This feature is of great assistance in stabbing the joint and in preventing injury to the starting threads.

6. "NATIONAL" A. P. I. Seamless Interior Upset Drill Pipe is furnished regularly with an average length of not less than 20 feet for each carload shipped, with not over 5 per cent of any carload in lengths between 20 feet to 18 feet, the latter length being the minimum length that will be shipped.*

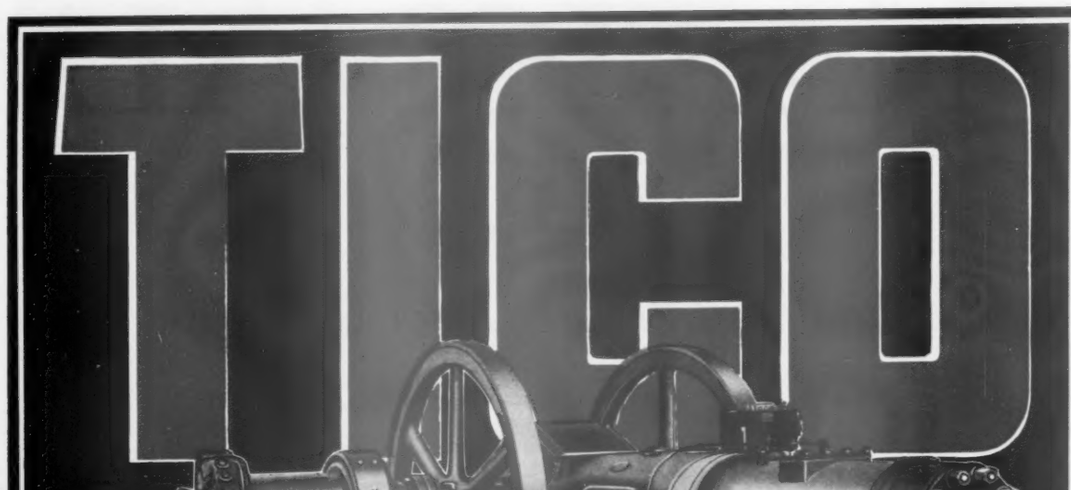
*When long length material is specified, the lengths will average not less than 27 feet with a minimum length of 26 feet, and a maximum length of approximately 30 feet. Not more than 5 per cent of lengths may range from 26 to 27 feet.

TO obtain the maximum service from this pipe, the operator should use tool joints designed to give the same fit as the couplings. These tool joints should have vanishing threads at the bottom of the recess to correspond to the angle of vanish on the shoulder of the pipe, and the tool joints should be tapped large enough to permit them to screw up by power until all full threads on the pipe are engaged by the threads of the tool joint.

NATIONAL TUBE COMPANY, PITTSBURGH, PA.

District Sales Offices in The Larger Cities

"NATIONAL" Seamless Couplings are available in all sizes and types for any oil country purpose



Unequalled — for Handling Deep Wells—

One Production Superintendent writes: "I do not know of any other engine that I could recommend *so highly* for handling deep wells."

Another: "After having used the TICO Engine and Clutch the length of time we have, I would not hesitate to recommend it to anyone to handle deep wells."

TICO Gas Engines are now drilling, swabbing, cleaning out, pumping, pulling rods, tubing and casing, in every deep well territory. This engine has surprised thousands of operators by proving equal or superior to steam, for deep well work. Sales are phenomenal. Investigate this wonderful engine at any Continental Store.

"If CONTINENTAL Sells It, There Is No Better"

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Refinery Section Starts on Page 128

Production to Continue at High Level

Highest daily average estimated production in 1926, week ended Dec. 25, 2,385,139 bbls. Lowest in 1926, January 30, 1,915,960 bbls.

Little Relief From Situation Expected During Remainder of Year. More Seminole Crude Available for Purchase

By Andrew M. Rowley

Highest daily average estimated light oil production in 1926, week ended Dec. 25, 1,797,349 bbls. Lowest in 1926, Jan. 30, 1,371,600 bbls.

All indications at this time point to a continued high production of crude petroleum during the remainder of this year and it is not believed any substantial decline in output, from the present rate, will be recorded during that time. There will be a natural falling off in some fields but the production of the main producing areas probably will be maintained at a comparatively high level during the next two or three months at least. While the Little River Pool in the greater Seminole area doubtless will be of much smaller extent than at first estimated, it will produce a considerable quantity of crude.

West Texas continues as a menace to the general situation. Regardless of whether all that production can be marketed, the psychological effect of such a reserve output is an important factor. In other words, there is a big potential production which can be thrown on the market when facilities for handling it are completed. Trouble may be had in refining the crude because of sulphur and salt water and it is not as desirable as the crude of other fields but that production has its effect upon the general situation nevertheless. In addition, it became noticeable this week buyers are not as anxious to take as much Seminole crude as formerly. Until recently, it was a difficult matter for an outside agency to buy any crude in that area. This condition has eased up materially, according to late reports.

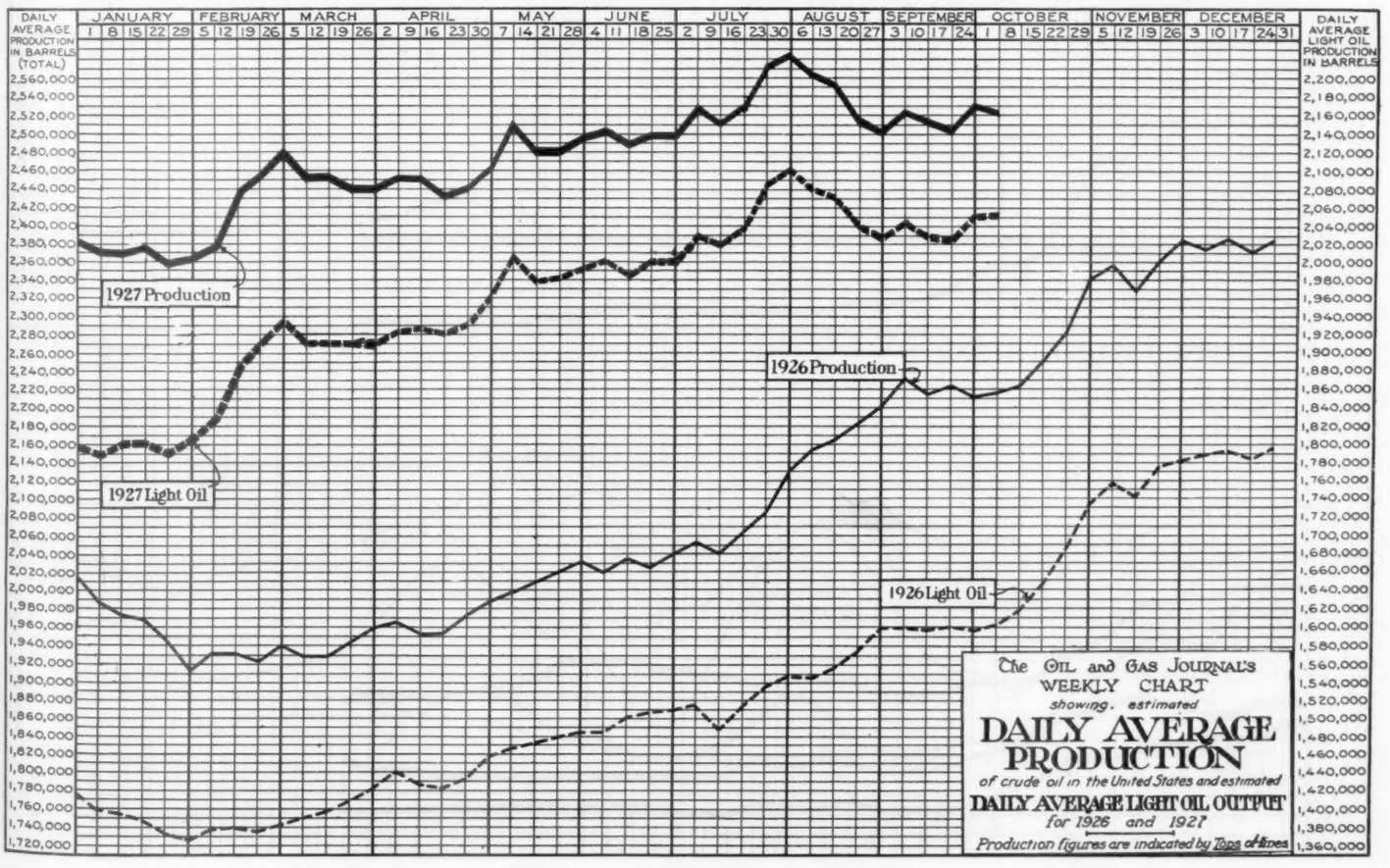
With approximately 60,000,000 barrels of crude added to storage so far this year and all indications pointing to a continued increase in stocks during the remainder of the year, it seems as if the industry may as well resign itself to a continuance of the overproduction situation for some time. Owing to the vast sums invested in drilling campaigns, it is not believed low prices for crude will have a great effect upon field operations in active areas.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity oil in the United States for week ending October 1, and a comparison with the previous week follows:

	Oct. 1		Sept. 24	
	Light	Heavy	Light	Heavy
Oklahoma—				
Tonkawa	18,770	.....	18,620	.....
Burbank	35,435	.....	35,880	.....
Other Osage Fields	30,730	.....	30,755	.....
Cushing and Shamrock	21,215	.....	21,285	.....
Bristow and Eastern Bristow	24,940	.....	24,935	.....
Cromwell	13,170	.....	13,210	.....
Garber	10,785	.....	10,890	.....
B'ackwell-Braman	9,080	.....	9,095	.....
Seminole	454,210	.....	444,510	.....
Wewoka	14,135	.....	14,135	.....
Northern Miscellaneous	111,185	.....	111,140	.....
Southern Fields	66,020	.....	66,050	.....
Total Oklahoma	809,675	.....	800,505	.....
North Louisiana	42,340	9,890	43,375	9,980
Arkansas	22,195	78,360	22,615	78,510
North Central Texas	152,915	.....	154,754	.....
West Texas	190,679	.....	186,889	.....
Texas Panhandle	89,765	.....	93,455	.....
East Central Texas	30,617	.....	30,783	.....
Kansas	104,840	.....	105,110	.....
Total Mid-Continent Area	1,443,026	88,250	1,437,486	88,490
Gulf Coast	.....	139,670	.....	145,576
Southwest Texas	.....	30,292	.....	30,869
Eastern	111,000	.....	112,000	.....
Rocky Mountain Area	79,247	.....	74,511	.....
California—				
Santa Fe Springs	39,000	.....	39,000	.....
Long Beach	90,000	.....	91,000	.....
Torrance	4,000	17,000	4,000	17,000
Huntington Beach	66,000	.....	67,500	.....
Dominguez	15,000	.....	15,000	.....
Rosecrans	8,000	.....	8,000	.....
Inglewood	21,000	12,000	21,000	12,000
Ventura Avenue	57,500	.....	58,000	.....
Seal Beach	67,500	.....	71,000	.....
Remainder of State	54,500	184,000	55,000	184,000
Total California	422,500	213,000	429,500	213,000
Total United States	2,055,773	471,212	2,053,497	477,935
Grand Total	2,526,985		2,531,432	

→ **Total Decrease, 4,447 Bbls.; Light Oil Increase, 2,276 Bbls.** ←



Higher Gravity Gasolines Stronger

Improved Export and Domestic Demand Bring Higher Prices. U. S. Motor Lower. Kerosenes Advance

By C. O. Willson

The first few days of October in the Oklahoma (Group 3) market were marked with strength in the high gravity gasolines with continued dullness in the lower gravities. Prices on high gravity gasolines advanced during the week but sellers generally were unable to maintain the previous week's prices on 58-60 U. S. Motor gasoline and the grades of lower gravity. Kerosenes continued in a strong position with fuel oils reflected in a trend toward lower prices.

As is usually the case, the bulk of the so-called export business for the high gravity gasolines, which includes the coastwise movement, is being placed with the North Texas rather than the Oklahoma and Kansas refiners. This situation is due to a slight freight rate advantage of the refiners located in the former area. This demand, however, which has practically absorbed all the high gravity material available in the North Texas area for immediate shipment, is largely responsible for a general stiffening in the same grades in all parts of the Mid-Continent.

Many of the trade are expecting this coastwise and export demand with the Mid-Continent refiners to continue through the fall and winter months. This business was conspicuous by its absence over the greater part of the spring and summer months, a situation which has been held accountable for the relatively narrow spreads between the low and high gravity grades of gasoline.

It is claimed in this connection that the export market has dropped to the point where no additional price reductions are expected. Foreign buyers are said to have sensed this situation and are now willing to buy not only for current requirements but in some cases storage programs are under way. Just how much of this increased demand the Mid-Continent refiners will obtain obviously depends on the relative prices maintained by the refiners located in that area and the coastal refiners. Should the demand continue through the remainder of the year it may tend to offset a situation in the domestic gasoline market which is not bright at this time from the standpoint of the Oklahoma refiners and those of adjoining states.

REFINED MARKET BAROMETER

Kerosene continued to be the strongest product in the list of refined products throughout the United States during the past week. Practically every refining area reported a strong or advancing market on all grades during the week in domestic sales while the export market continued strong following advances of previous week. Along with the continued strength in kerosene there was a noticeable improvement in the high gravity gasolines centering in the Mid-Continent. In the common domestic grades of gasoline the market is still weak, prices again being reduced when any changes were made. Some improvement was noted in the fuel distillate demand but there were no important changes in prices. Market developments in the heavier fuel oils point to lower prices in practically all refinery areas, the coastal market as well the interior being weak. Natural gasoline prices were advanced in California with the Mid-Continent market steady. Prices on lubricants and wax were firm during the week.

Mid-Continent—Higher gravity gasolines advanced in all areas. The 58-60 U. S. Motor gasoline was weak in Oklahoma, Kansas and North Texas. Kerosene strong in all areas and prices strong. Fuel oils sluggish. Gas oils steady. No change in distillate prices.

Atlantic Seaboard—Kerosene strong. Gasoline weak. Lubricants wax and petrolatum firm. Weakness apparent in fuel oils and gas oils. Fair export movement.

Pennsylvania—More optimistic feeling among refiners with scattered advances in gasoline and kerosene. No change in neutrals. Wax stronger. Slow up in bright stock demand.

California—Kerosene export prices to Orient lowered. Natural gasolines prices higher. Heavy movement of fuel oil to East Coast.

Chicago—Gasoline market not active except for higher gravities. Kerosene strong. Fuel oils slow. No change in gas oils.

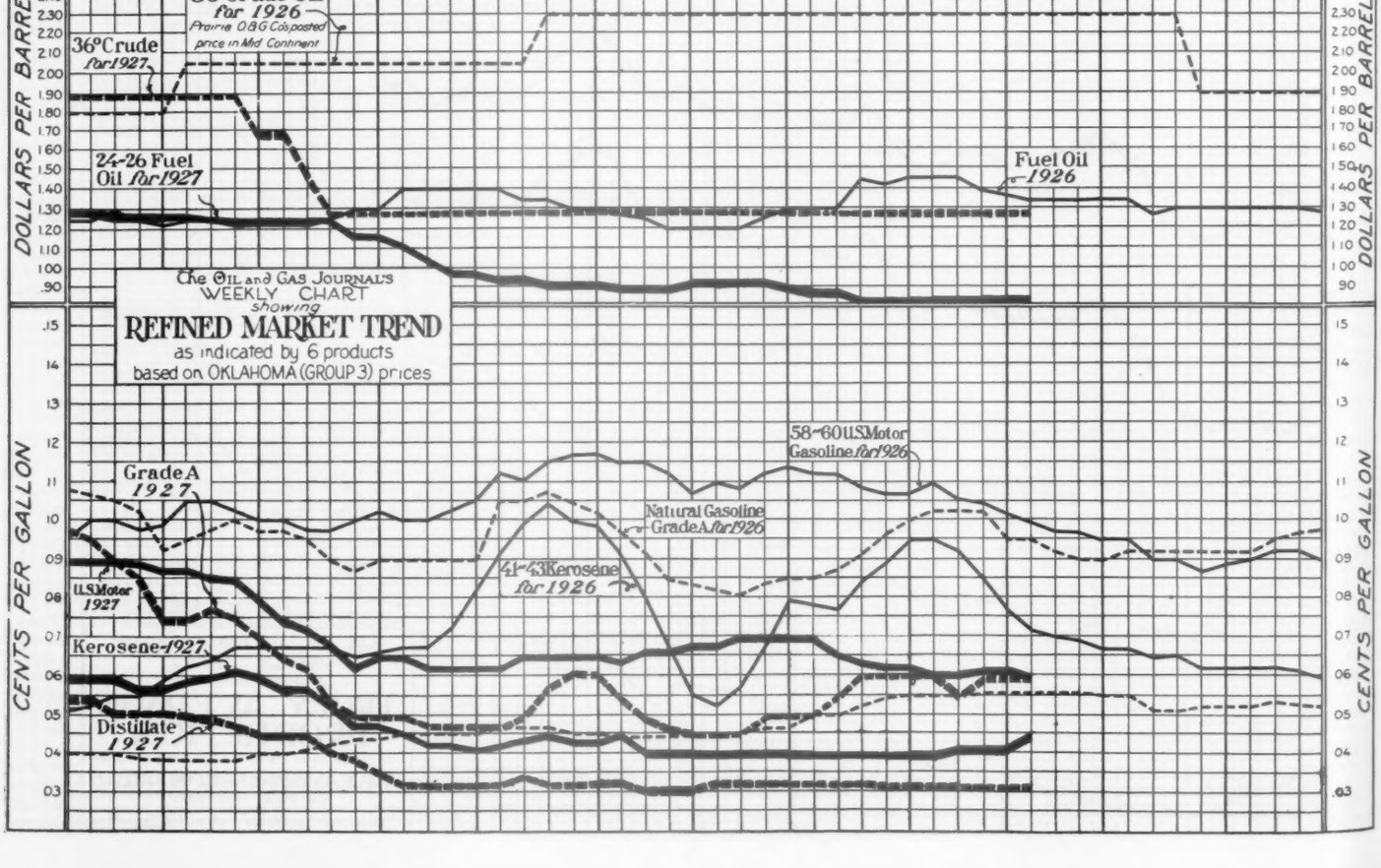
High Gravity Gasolines

In addition to the added export outlet for the higher gravity gasolines there has been some improvement in the domestic demand for these grades which has also tended to strengthen the market. Several refiners state that they have had a substantial increase in their demand for 400, 390, 375 and 360 endpoint gasolines from jobber customers located in the northern states and Canada. This is a seasonal development reflecting the advent of cold weather in the northern areas. These jobbers are accustomed to retail a high gravity low endpoint gasoline during the fall and winter months and are now buying from the refiners in expectation of that demand.

Many of the trade are predicting that the trend toward the more volatile grades of gasoline will be general a little later in the year. With all grades of gasoline low in price there is every incentive for those in charge of the retail markets to increase their winter gallonage by offering their customers a gasoline which gives the most satisfactory motor performance even in areas where the winters are mild.

Should this prediction materialize in the domestic market, coupled with a large export movement, a return to a more normal spread between the low and high gravity grades in the refinery market is assured. A strong kerosene market, which has featured the Mid-Continent market for the past two weeks, would also tend to bring this condition about. This does not mean a return to the 3 and 4-cent spreads between 437 and 375 endpoint gasolines which were effective a few years ago, but it will get away from

(Continued on Page 145)



Producing Needs of the Near Future

Experience of Past Four Years Indicates What May Be Expected of Producers in the Coming Four Years

By James McIntyre

In the 68 years of the petroleum industry it has seldom seen the ideal condition when there was an equality of production and consumption. Most of the time we have had too much crude oil. Since the early sixties there have been few periods when the producer received a high price for crude and there has never been a time since the beginning of the rise in prices in 1914 when the public had to pay for oil products as it was made to pay for its food, clothing and shelter.

All this year and possibly much of next there is and will be more crude oil in sight than the world can absorb, and the effort is being made to keep most of the potential flush production in the ground so that a bad situation will not be made ruinously worse.

Just now we are producing approximately 300,000 bbls. a day in excess of demand and fields have recently been opened which, if they were developed, could increase this over 200,000 bbls. Oil shut in in California and Wyoming, if it were produced, would bring the excess up to 650,000 bbls. a day or more, and while this looks at first hand as if it would be a never-ending bad situation, it appears much less alarming if we go back a few years and note what happened to a lot of very large oil fields that are now given only casual notice.

It does not take long for conditions to change in the oil business. We had a situation like the present in 1923, but it may surprise many oil men to know that in addition to the present production from the pools and sands that were known in the fall of 1923, the demand for crude oil products has required an additional 1,000,000 bbls. of crude per day. The fly in the ointment is that we have not only supplied this 1,000,000 bbls. but have actually provided 1,300,000 bbls. a day to meet the situation and have altogether a potential production of 1,650,000 bbls. in the pools and sands which have been discovered in the past four years.

Looking Ahead Four Years

When we see what has taken place since 1923 it is interesting to speculate on what may be the situation four years in advance of us.

On October 1, 1923, the production of the United States was 2,262,075 bbls. On October 1, 1927, four years later, the production of all the pools and oil sands producing in the fall of 1923 had fallen to 1,216,930 bbls. a day, a decline of 46 per cent. Meanwhile new pools and deeper sands in old pools have more than maintained production, and on October 1, 1927, these newer pools and deeper sands are producing 1,310,675 bbls., making the total actual production on October 1, 2,527,605 bbls.

If the shut-in oil in Wyoming and California were released it would bring the production up to around 2,700,000 bbls. and fields in Pecos, Crane, Upton and Winkler Counties in West Texas, had they been operated at the normal rate to which new pools are subjected under favorable conditions, could have increased the production 250,000 bbls. a day more, bringing the potential production on October 1, 1927, to 2,950,000 bbls.

At the same rate of decrease that took place in the past four years this potential production of 2,950,000 bbls. would be down to 1,575,000 bbls. in four years and this may be the aspect our present-day fields may present on October 1, 1931, which will give the reader some idea of the size of the job that faces the producing end of the industry in finding new producing fields sufficient to meet the increased requirements of four years hence.

Old and New Production

In the table just below, the first column of figures represents the total production of the areas named on October 1, 1923. The second column shows the present production of the fields and sands that were producing in 1923. The third column shows the present production of fields discovered since 1923 and of the deeper sands discovered within the past four years in older fields, like Spindletop, Smackover, Garber and Tonkawa. The fourth column shows the total production of all fields on October 1 of this year:

Field	1923 Flush and Settled Production Barrels	1927 Settled Production Barrels	1927 Flush and Semisettled Production Barrels	1927 Flush, Semi and Settled Production Barrels
California	867,000	479,850	161,900	641,750
Oklahoma	425,120	255,870	544,130	800,000
Kansas	74,475	73,500	32,000	105,500
North Louisiana	59,435	36,160	17,115	53,275
Arkansas	130,610	39,460	62,050	101,510
Eastern fields	107,810	103,400	4,100	107,500
Gulf Coast	99,200	60,500	85,000	145,500
North Central Texas	113,000	77,640	77,670	155,310
West Texas	.....	.....	186,000	186,000
Panhandle of Texas	.....	.....	93,500	93,500
East Central Texas	217,225	24,250	6,510	30,760
Southwest Texas	.....	.....	32,000	32,000
Rocky Mountain	168,200	66,300	8,700	75,000
Total	2,262,075	1,216,930	1,310,675	2,527,605

Decline of Big Fields of 1923

On October 1, 1923, the 10 largest flush and semiflush fields in the United States, headed by Santa Fe Springs with a production of 325,000 bbls., were making 1,311,380 bbls. The same pools October 1, 1927, were producing 416,280 bbls., or a decline in four years of 68.4 per cent.

The decline in some of the fields much exceeded the average decline for the 10 fields, Santa Fe Springs showing a drop of 88 per cent in production; Salt Creek, 74.8 per cent, and Powell close to 91 per cent.

The production of the 10 fields on October 1, 1923, represented over 42 per cent of the total production of the United States at that time. The present-day production of the same fields from all sands represents less than 17 per cent of the present-day total production and 34 per cent of the old settled production of the country (production four years old or more.)

The record of the 10 leading flush and semiflush fields of 1923 taken on October 1 of that year and the present production of the same fields follows:

	Oct. 1, '23 Bbls.	Oct. 1, '27 Bbls.
Santa Fe Springs, Calif.	325,000	40,000
Long Beach, Calif.	240,000	91,000
Huntington Beach, Calif.	90,000	68,000
Burbank, Okla.	99,500	36,115
Tonkawa, Okla.	55,600	18,665
Bristow, Okla.	54,000	25,000
Powell, Tex.	163,280	14,750
Mexia, Tex.	46,000	9,600
Salt Creek, Wyo.	130,000	32,750
Smackover, Ark.	108,000	78,400
Total	1,311,380	414,280

Big Fields of 1927

There are not 10 big flush fields in the United States at this time as there were in 1923, and in order to present a list that will measure up with the big fields of four years ago it will be necessary to include potential big fields. Such a list can be made up as follows:

	Est. Daily Potential Prod. Oct. 1, 1927 Bbls.
Pecos County, Tex.	156,000
Crane-Upton Counties, Tex.	166,000
Seminole area, Oklahoma	500,000
Hutchinson County, Tex.	77,500
Spindletop, Tex.	57,000
Salt Creek, Wyo.	125,000
Winkler County, Tex.	46,000
Seal Beach, Calif.	71,000
Total	1,198,500

The estimates on Pecos, Winkler and Crane-Upton Counties are based on W. S. Farish's estimate of the possibilities of those counties on October 1 with unrestricted drilling. The Salt Creek estimate is based on the estimated shut-in production of the Dakota and Lakota sands.

The 10 big fields in the fall of 1923 have declined 68.4 per cent in production in four years. A similar decline in the eight big potential fields of the present would reduce their possibilities to 379,000 bbls. a day by October 1, 1931.

Many Settled Fields

Naturally the big decline in production covering a period of four years must come in the flush fields. Four years from now there will be no appreciable decline in the fields east of the Mississippi River. It is a very old territory with something like 185,000 oil wells the production of which might better be measured in gallons than in barrels. In all the eastern fields producers are using modern aids to production wherever such new methods—the application of vacuum, compressed air or water drive—may be beneficially applied, and they may be depended upon to nurse every drop of oil they can get out of their old strippers.

The decline in Kansas should be slow. With the exception of the new pools in Sumner County most of the present production is on a settled or nearly settled basis. The same may be said of most of the Oklahoma pools outside of the general Seminole area and new pools in the westerly counties. Rocky Mountain fields are on an average pretty well settled. The decline there should be gradual in the pools already known and with a notable exception or two California has reached a settled and semisettled basis in the already known fields. North Louisiana and Arkansas will not show a large decline in four years from their present producing areas. East Central Texas fields may be regarded as settled. With the flush off in the eight potentially big fields of the present the need for new oil-producing territory will be acute.

It has been estimated if refiners had to confine their operations to the manufacture of motor fuel and lubricating oil, that operating with maximum efficiency they could get along with a minimum of 930,000 bbls. a day of crude oil and yet keep even with demand in 1931,

(Continued on Page 144)

GREATER SEMINOLE PRORATION PLAN EXTENDED; LITTLE RIVER INCLUDED

By J. L. Dwyer

At a meeting called by Ray M. Collins, umpire of the Seminole Field, and agent of the Oklahoma Corporation Commission, held in Tulsa on Tuesday of this week, the oil companies operating in the Seminole territory voted to continue the program of curtailed production for a period of 30 days from October 5, with certain modifications.

Under the revised plan of limiting the output of the Greater Seminole area, the daily oil production of all pools, including Little River, will be limited to 450,000 bbls., prorated over the entire territory. The Little River Pool wells were permitted to produce 100 bbls. per day and later 75 per cent of their potential capacity, while the remaining pools of the field were reduced approximately 15 per cent in output. Due to normal decline conditions, the output of the Earlsboro, Bowlegs, Seminole, and Searight Pools dropped below the prescribed figure of 450,000 bbls., but the production of the Little River Pool caused the total output to pass the 450,000-bbl. mark.

Under the revised plan of operations in this area, some wells may be shot after application to the umpire who continues in charge of the field operations and production. It is thought that in the case of wells having a light production, small shots will be permitted, and it is believed that in the case of wells having large output, shooting will continue to be prohibited.

The functioning of the new plan will give the companies in the Little River Pool an improved production, as at this time the output of their wells has been reduced 25 per cent. It is likely that the new plan will permit the Little River wells to produce about 90 per cent, as only a 10 per cent cut is necessary to place the current production under 450,000 bbls. per day.

A feature of the meeting which adopted this resolution is that the vote was unanimous, not a single dissenting vote being registered. The Blackwell Oil & Gas Co. had no representation at the meeting, and its attitude on the revised plan is unknown. There has been a legal question about its status in the Little River Pool, and a question of jurisdiction has been raised. With the exception of the Blackwell Oil & Gas Co. all the units operating in the Seminole area were represented.

The advisory committee in charge of the Seminole proration plan, and in joint control with Umpire Collins has been altered by the resignation of George N. Moody, vice president of the Mid-Continent Petroleum Corp., who was forced to withdraw on account of business. He was succeded by R. F. MacArthur, vice president of the Barnsdall Oil Co. The advisory committee in charge now consists of Howard N. Cole, vice president of the Pure Oil Co., chairman; J. J. Conry, general superintendent of the Carter Oil Co.; Joe S. Sidwell, of the Prairie Oil & Gas Co.; R. B. Pringle, vice president of the Independent Oil & Gas Co., and Mr. MacArthur.

At the Tuesday meeting the resolution below was passed after being formulated by the Seminole legal committee. The legal committee is composed of James A. Veasey, chief counsel for the Carter Oil

(Continued on Page 145)

Foreseeing Gasoline of Tomorrow

Declares It Will Be Stable, Colorless Motor Fuel Which Will Not Deposit Gums in Operation or Storage

By M. R. Mandelbaum*
Gray Processes Corporation

How will tomorrow's gasoline differ from that of today? We have already decided that, unless unforeseen circumstances intervene, it will come from petroleum. The difference, it seems to me, will be not so much in the product itself (although there will be some changes), as in the tests we use to evaluate it. It would not be asserting too much to say that in many respects tomorrow's gasoline is already here, although those of us not yet accustomed to the new measuring rods cannot recognize it.

The question of detonation characteristics, as we shall soon see, is rapidly being solved. The point still to be accomplished is the understanding of all involved, including the middleman and the ultimate consumer of the importance of this property. When this is done it will be possible for the motor manufacturers to design engines which will take advantage of these characteristics and operate much more efficiently than present ones. Their willingness to co-operate towards greater efficiency is shown by the fact that a few manufacturers have already introduced optional cylinder heads, giving somewhat higher compression ratios, to take advantage of the antiknock gasolines now on the market. One manufacturer has recently introduced a new motor said to run at high compression with ordinary gasoline without knocking. These are steps in the right direction, but the full development of the high compression motor awaits the marketing, by the refiner, of still better antiknock gasolines than are generally available today. He can do this, as we shall soon see by an extension of the use of cracking to its logical fulfillment, and the segregation of his cracked products rather than their sale, blended with straightrun gasoline, as is the practice today. It is surely not too much to expect that in a few years we will see filling stations in which several types of gasoline are sold, distinguished not only by their brand name but by their detonation characteristics. The intelligent motorist will be able to drive up to the curb and ask for—and get—a gasoline with a highest useful compression ratio of 6 or 5 or 4, whatever his needs will be. Due to the large number of motor cars with low compression ratio in operation today and the ever-increasing life of such equipment, it will be some time before all motorists will want to pay the additional price, however small, that will be deservedly exacted for the more efficient fuels. This will make it possible for some time to dispose of low compression gasolines as well as high without the necessity of adding dopes or knock suppressors to the former. Then, as the low compression motors gradually pass out of use due to the greater economics effected by the more efficient ones, the gasoline having naturally a lower antiknock rating will be brought to the required mark by the addition of knock suppressors, such as highly cracked gasoline, benzol, ethyl fluid or the like.

Rating of Gasolines

How the gasolines will actually be rated—whether by H. U. C. R. (highest useful compression ratio), or benzol equivalent, or aniline number, is problematical. Very likely, a satisfactory motor test will be devised and adopted as standard, perhaps based on the new scale developed by Edgar, which has the advantage of using as comparison fuel mixtures of two pure compounds.

Cracking results in the production of gasolines with a greatly increased olefine combined with an increased naphthene and aromatic content and a considerable improvement in the knock rating. So we see that cracking not only increases to a great extent the amount of gasoline produced from a particular crude but also increases the efficiency of the product and so is a great factor towards conservation. It is interesting to bear in mind that the very properties of cracked fuels which make them so valuable were at first looked on as extremely undesirable. Instead of emphasizing the difference between cracked and straightrun gasolines it was attempted in the early days of cracking to make the properties of the cracked as much like those of the straightrun as possible and to hide the fact that cracked products were used in a blend. Fortunately these conditions are rapidly passing as a result of enlightened public opinion, and although it is yet a bit too early to say they are gone forever, it is not a rash prediction that they will soon be forgotten. We see then that cracking intelligently applied furnishes a source for much of the antiknock motor fuel of tomorrow.

Vapor Phase Products

It is now known by petroleum technologists that gasolines produced by vapor phase cracking are even more suitable from the antiknock standpoint than those produced by higher pressure processes which are in most common commercial use at present. Several large refining companies are carrying on extensive experiments with vapor phase cracking, and it is likely that the near future will see considerable changes in the practical art. But of equal interest are other experiments which indicate that slight modifications of cracking conditions in present-day equipment, particularly increase in cracking temerature, result in gasolines which compare very favorably with the vapor phase cracked products.

But the solution is not as simple as it seems. In addition to the chemical changes which result in the formation of desirable antiknock hydrocarbons, there are other changes taking place during the cracking action which produce other substances which are extremely undesirable. If they are not removed they will result in a gasoline which will be dark and unstable in color and which will tend to form deposits in storage and form gums on intake valves and other parts of the gasoline feed system of motor cars. There have been numerous instances where attempts to market insufficiently refined cracked gasoline resulted in serious damage to engines and reputations. Straightrun gasolines are ordinarily free of substances which produce such conditions, and consequently they need little or no refining, but there is no question that it is very important in the case of cracked products. It is true that an occasional voice has been raised to protest that this refining involves too great an expense and too much of an economic loss to warrant it. We shall soon see that neither from the standpoint of the expense involved nor that of the losses is the refining of cracked gasoline rendered uneconomic, if properly carried out.

Question of Color

We come now to a secondary characteristic of the product, not important in itself but important as an index of the refining to which a gasoline has been subjected and about which considerable loose statements have lately been made. I refer to color. There is no trouble, of course, in refining straightrun gasoline to a water white color, and the result has been that refiners in the past were apt to emphasize this feature of their product by the use of visible pumps and the like. With cracked gasoline, however, the circumstances are very different and as a result the tendency is now to try to swing the pendulum in the other direction. We see many instances of gasoline being sold even from visible pumps with no attempts made to mask its yellow color and other instances where dyes have actually been added to produce a colored gasoline for advertising or other purposes. It has been said that the day will come when it will be possible for the motorist to buy gasoline of every possible hue, and for the fastidious to match the color of his gasoline to that of his car or his necktie. But such a tendency can not be assailed too strenuously. It is, of course, obvious that regardless of the taste of the driver the engine has no preference and that it will perform equally satisfactorily with gasoline be it red, blue, green or white, so long as it has been properly refined. But it is also true that any process of refining which is thorough enough to remove the objectional gum-forming constituents from gasoline will also be thorough enough to produce a water white product.

Realizing this the careful motorist will choose rather the colorless gasoline which at least shows signs of some refining than the off-colored one which for all he knows may be the product of the cracking stills without any treatment whatsoever. He will patronize the distributor who offers him a clear, good-odored gasoline rather than the one who tries to sell him a muddy off-colored one. So that the jobber, it seems very likely, will continue to demand a colorless product and one that will hold its color when exposed in visible pumps for several hours at least.

Economic Waste

The argument has been made that refining cracking gasoline to color and stability necessitates an economic waste in several directions. First, according to this view, there is the direct cost of the treatment, which is a fraction of a cent per gallon. Then and probably most important is the treating loss which, where sulphuric acid is the treating agent, will probably average about 4 per cent, which is, of course, an appreciable amount from the conservation standpoint. A still further element of loss where sulphuric acid is used as the refining agent for cracked gasoline is the decrease in antiknock value of the product due to the solution and conversion by the sulphuric acid of some of the valuable antiknock hydrocarbons which unfortunately react with the acid. This has given rise to the statement in some quarters that a colorless gasoline is ipso-facto less desirable from the antiknock standpoint than a colored one. Of course, if this would be exactly correct there would be much to be said from the standpoint that refining cracked gasoline is a tremendous economic waste of natural resources and should be cut down as much as possible. But these statements hold only for refining with sulphuric acid which, it is true, is the method in most usual use today. In fact, there is still an additional loss due to the fact that gasoline treated with sulphuric acid must be rerun in order to eliminate substances which might otherwise on using the fuel decompose into acidic substances which cause considerable corrosion of motor parts.

Without Sulphuric Acid

It is, however, possible to refine cracked products satisfactorily without the use of sulphuric acid. This is accomplished, for instance, by vapor phase refining, which is rapidly being accepted by progressive refiners in this country and abroad as the solution of the refining problem as far as cracked products are concerned. By the use of this process not only is the total cost of treating reduced to less than one-fifth cent per gallon and the treating losses cut down to the very minimum allowable with the removal from the gasoline of the objectionable substances, but this is accomplished with no loss of the valuable antiknock constituents of the gasoline. Tests have been run on cracked gasoline before and after treatment by vapor phase refining which show that the difference expressed in terms of benzol equivalent, which is one of the ways of expressing antiknock value, are so small as to be practically unmeasurable. The product, in addition to being ideally suited as a motor fuel from the standpoint of gum deposit is moreover of good color and stable and completely eliminates any necessity of the use of dyes, which should be restricted to gasoline containing added poisonous substances.

While on the subject of refining it would be fitting to mention that with the trend going towards more rigorous cracking conditions, it will be increasing-

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*Address before Four State Jobbers meeting, Kansas City, Mo., October 4.

FOUR STATE JOBBERS SESSION INTERESTED IN QUANTITY DISCOUNT

By W. T. Ziegenhain

KANSAS CITY, Mo., Oct. 4.—Oil jobbers from all parts of Missouri, Kansas, Nebraska and Iowa met here today in the annual Four State Jobbers Convention. Headquarters are at the Kansas City Athletic Club.

At the meetings of the state association held here this morning it was apparent the jobbers are primarily concerned with possible changes by the Standard Oil Co. of Indiana in its quantity discount plan. The Indiana company is said to have under consideration certain changes in its marketing methods.

Missouri jobbers were asked to contribute $1,000 to defeat the proposal to increase the gasoline tax to 4 cents. No action was taken at the morning meeting. The Missouri jobbers re-elected George Allee as president and secretary of the association. Other officers elected were: vice presidents, C. L. Ackert of St. Louis; Wash Adams, Springfield; W. H. Smith, Macon, and John G. Gibson, Jefferson City; treasurer, C. W. Elstun of Kansas City. Directors elected were W. T. Atkins, Kansas City; Bert Bertram, Kansas City; Sam Rotenberg, St. Louis; C. B. Hood, Joplin; George Koertel, St. Louis; A. L. Land, Warrensburg; W. R. McCain, Springfield; Paul McMahan, Seymour; H. E. Miller, Festus; H. H. Mutz, Maryville; Walter Ware, St. Louis.

Dr. G. G. Brown, head of the Research Department of the Association of Natural Gasoline Manufacturers, discussed progress made in gasoline quality by application of research in past. He also discussed antiknock and volatility in gasoline. He predicted future gasoline will be more volatile with relatively high antiknock properties and through further improvements in the design of motors ordinary gasoline free of dopes will be satisfactorily used. In his opinion engines of future will not have much higher compression ratio than of the present time.

Hazardous Drilling in Swamp Area

Unique Problems in South Louisiana Studied Out in Advance of Development Resulting in Economical Operation

By James H. Dameron

LOCKPORT, La., Oct. 1.—Strangers, for the first time getting a panoramic view of Louisiana's oil field on stilts in the heart of a deep marsh, frequently ask, "what caused this?"

If their guide is in a loquacious mood they are told that an old negro trapper, trapping in the swamps of Calcasieu Parish, held the secret of the Lockport Field's existence for years. There are no surface indications of a dome at Lockport but the old negro had found a gas seep on the edge of the marsh. Not knowing what it was he carefully concealed it with brush until he learned what the seep indicated.

Later, for a consideration, he divulged his secret to some lease brokers who assembled a block there. Some time after the Vacuum Oil Co. and the Gulf Refining Co. took over the block as a joint operation, with the Vacuum company retaining the largest interest. While the old negro trapper says he is "well fixed" he is spending his remaining years in the employ of the operating company at the field.

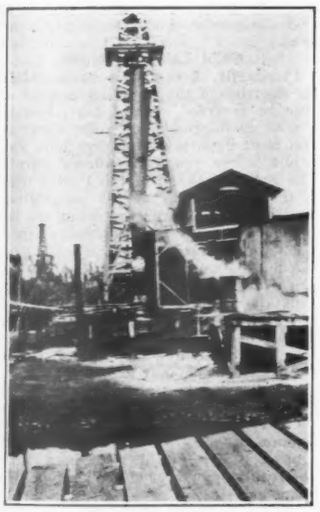


Photo showing arrangement of equipment for drilling in Lockport.

The Lockport Field is a great curiosity because of its many unique features so uncommon to other areas. It also is a model field in many respects. Its development since its discovery has been in harmony with economic conditions. Because of the marsh conditions the fire hazard is great and the field is necessarily a clean one and one well protected in the event of fire.

Louisiana has another unique field in the Gulf Refining Co.'s famous Ferry Lake lease in Caddo Parish which is one of the greatest inland marine fields and comparable in some respects to the Lockport Field. In the drilling and producing of that field the Gulf company finds it necessary to maintain a "little navy" because of the depth of the water.

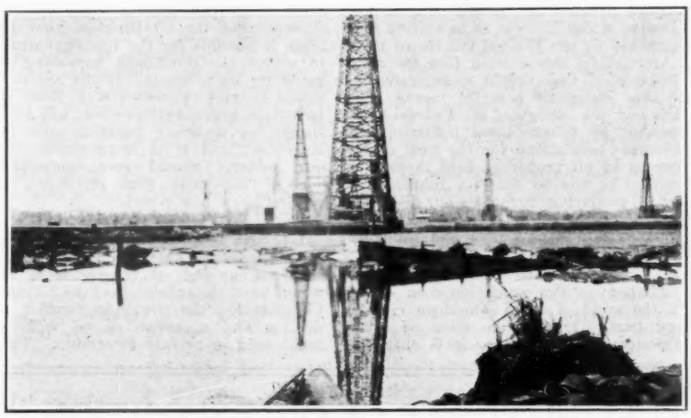
Treacherous for Drilling

The Lockport Field, however, with its marsh conditions, is a more treacherous area to drill in. The soft muck in the marsh varies in depth and is roughly estimated to be around 60 feet deep. It is said that a man can bury a joint of 4-inch drill pipe by driving it below the surface with the strength in his arms. Practically all of the drilling has been carried on in the heart of that marsh and high and dry locations are few and far between.

In addition to the problem of getting the derrick on a solid foundation numerous other small drilling problems are constantly arising. To get equipment on a location tramways were built and now a network of trams extends all through the marsh to the various producing and drilling wells. The legs of the trams are anchored to small mats. Trams are wide enough and substantial enough to hold a heavily loaded truck. At every well the tramway is widened to permit freedom of movement of trucks and to permit field traffic to pass. Built up dirt roads with a high crown are being experimented with and with success so far. Those roads were built when the canals were ditched to afford more fire protection. The excavation dirt was thrown to one side and the roadway planked.

Derricks are built on 40-foot square mats made of two by twelves 20 feet long. The foundation is cribbed to the mat and the 120-foot wood derrick is built. The weight of the derrick and machinery does not bury the mat very deep, however, it is none too solid and the constant vibration of the rotary rig makes it necessary to jack the derrick occasionally.

A portable boiler house is moved to a platform near the rig and twin boilers are used in the drilling of a well. A flow tank and boiler water tank are set up on another platform built on small mats. A central mud mixing plant is located on a high point of the lease. There mud is mixed for every well and hauled to the drilling location on trucks and dumped into the box slush pit. In the event a heavy mud is needed it is mixed in the slush pit.



The crater formed when a well blew out in Lockport more than a year ago. The crater is still active at times.

Starting a Well

A well is started with a 22-inch hole and around 100 feet of 18-inch casing is set. A 17-inch hole is drilled to around 1,250 to 1,600 feet where 13⅜-inch casing is set and the well is drilled on down to 3,800 to 4,400 feet with a 12-inch hole where 9⅝-inch casing is cemented. The 6⅝-inch casing is cemented and used to complete the well with a 4¾-inch screen liner. Anywhere from 150 to 400 sacks of cement are used in the cementing of the 9 and 6-inch pipe. Frequently stray sands are encountered and the most promising of those sands are tested with sand testers.

Among the safety devices on each rig are the chain guards. They are made from large diameter pipe that had been salvaged. Welders cut the pipe in half and it is cut into necessary lengths at the machine shop at the field. Flywheels and cranks on pumping engines are also enclosed.

The machine shop is one of the most complete found in an oil field. All tools are dressed at the shop and practically any kind of repair work can be done with the equipment. Because of the isolation of the field from modern shops it has been found more economical to maintain the complete shop there.

While the field has only seven pumping wells they are unusual because all are pumped by steam. There are four central boiler stations in the field to supply steam for those engines. The main boiler station of the field is near the entrance. It furnishes steam for the gathering line pumps, the main line pumps moving the oil from the field to a tank farm, treating plant and heating system. The large volume of gas in the field is used for fuel.

A high tension line runs through the field and at some future date it is planned to electrify the field. At present only that power required for lights and the treating plant is utilized from the line.

All steam and oil lines in the marsh are built on the trams. The water lines for the entire field are also built on the trams. No trouble is experienced from freezing lines because at the worst southern Louisiana has little cold weather.

A scene of part of the marsh section of the Lockport Field.

Net Production

The net production of the field is around 5,300 bbls. daily with several of the wells making pipe line oil. However, most of the production has to be treated

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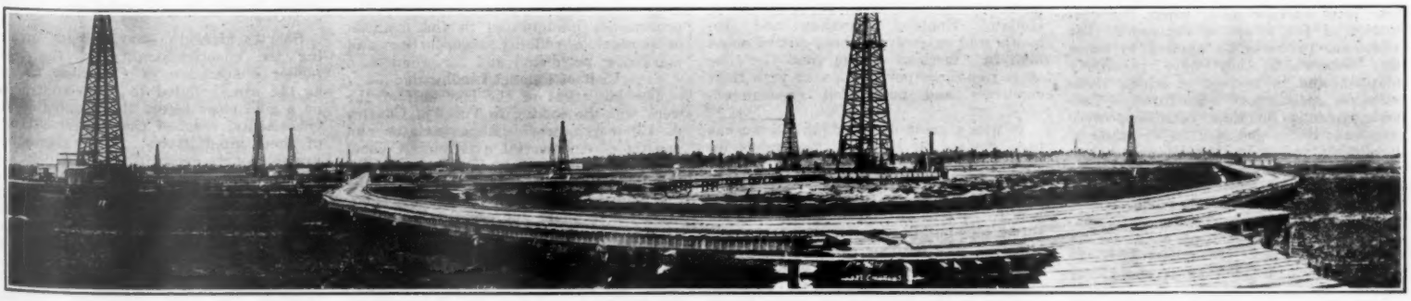

A panoramic view of the Lockport Field in Coastal Louisiana. The trams afford the only access to the various rigs in the heart of a deep marsh where production was found. All of the derricks in the marsh have to be built on mats. It is roughly estimated the marsh is 60 feet deep on an average.

Courts May Sustain Oil Regulation

Emergency and Change of Public Opinion Might Bring It About. Industry Warned to Act First

By James A. Veasey*
Vice President and Counsel of the Carter Oil Co.

The future of all aviation depends upon an adequate and reasonably permanent supply of its motor fuel and that indispensable thing the petroleum industry alone furnishes. On the other hand, the petroleum industry is now looking to aviation to enlarge in a most substantial way the demand for gasoline. Assembled here on this occasion are the men who in their individual capacity, or through their company associations, represent all departments of the oil industry in the great Mid-Continent Field, a region which is now supplying more than 60 per cent of the total crude production of the United States, and what is more important still to those interested in aviation perhaps 80 per cent of the higher gravity oils. Even the setting of the scene is peculiarly appropriate. We are meeting in the Oil Capitol of the World. The very name of our city is a trite synonym for petroleum. Possessing, therefore, a common interest, a brief allusion to one of the most serious problems which has ever confronted the American Petroleum Industry should be both fitting and timely.

It is asserted that overproduction in our industry leads to waste, and fear is expressed that this waste threatens the petroleum reserves of the country. Owing to the indispensable character of our products, this condition makes our problem one of public consequence as well as one of deepest concern to the industry itself. Three years ago, the President of the United States, having a full appreciation of the importance of our oil supply not only in relation to the prosperity and well being of the public generally, but also in relation to the national defense, and being alarmed concering the extent of our petroleum reserves, appointed the Federal Oil Conservation Board, and delegated to it the duty of studying the situation and recommending measures for relief; and in this connection the board was directed to seek the co-operation of the petroleum industry.

Oil Board's Opinion

This task was entered upon and the report of the Federal Oil Board to the President contained at least three important findings: First, it was stated that the competitive drilling system now characterizing our industry tended to overproduction, and that the practice for this reason was uneconomic; secondly, the high utility of the dissolved natural gas as a medium of producing oil was pointed out, and it was asserted in a general way that the industry was not using natural gas to produce oil to its full efficiency. The observation was made that if the industry would conserve natural gas encountered in oil formation for production of oil, oil would be produced in a more uniform rate, thereby to a considerable extent remedying the evil of overproduction, and that at the same time enlarging the ultimate recovery. Finally, it was set forth that overproduction in the petroleum industry drove its products into inferior uses, when the economics of the situation demanded that petroleum products be applied to those uses for which they were peculiarly adapted, and in respect of which there were no satisfactory substitutes. Two basic remedies for these conditions were proposed: Some sort of a unit method of developing and operating oil properties; and, in addition, a scientific and complete conservation of natural gas for the purpose of producing oil. The board, however, apparently appreciating the individualistic and technical character of the business, was of the opinion that the recommendations made by it could best be carried out by voluntary co-operation within the industry itself.

Decided Progress

In the meanwhile, considering the great difficulty and complexity of the conditions dealt with, I believe it can be truthfully stated that we have made rather decided progress in the direction pointed out to us by the Federal Oil Board. In these circumstances, just about a month ago, the industry was startled by a statement of the chairman of the Federal Oil Board made in a public address that he believed that the time had arrived when the Federal Government should ask Congress for legislation, intended to protect our oil deposits against waste in production. The appointment of a committee along designated lines was suggested to draft a bill to accomplish the purpose outlined by the Secretary of the Interior, which bill was to be studied and rechecked by the Federal Oil Board with a view of its introduction into the next Congress, if that should seem desirable. If this statement actually means that it is now the design of the Federal Government by congressional legislation to prescribe regulations for the unit development of oil properties held in private ownership, and to conserve natural gas for oil-producing purposes, our industry in strict necessity must oppose this program with all the power and influence it can command.

Deep-Seated Conviction

If there is any conviction deep seated in the mind of every American citizen, and particularly in the mind of every American business man, it is that the property he owns may be used and enjoyed by him according to his own will and desire so long as the particular use does not injure the person or property of another. This applies with peculiar force to our own industry. The business of producing oil is more individualistic than any other enterprise known to modern industry. One producer will drill a property that no other producer would dream of drilling. One producer may locate or space his wells on a principle not accepted by his neighbors. The methods actually employed to produce oil vary among operators, the difference depending upon the special experience and ingenuity of the operator. Every factor incident to the acquiring, development and operation of oil properties is highly technical in character. It is this very attribute of individualism which has ever characterized the oil business, that has made it possible for the industry always to supply the constantly increasing demand for its products. If the American public is once impressed with these all-important considerations there will be no clamor for statutory restraint upon our activities; and it is inconceivable that our industry should ever contemplate surrendering these vital privileges, excepting as a last resort.

Power of Congress

I believe I can safey give you the assurance that no American lawyer possessing a knowledge of constitutional law would be of the opinion that the National Congress has the power to regulate the drilling and operation of oil wells on lands held in private ownership. There is just one conceivable source of Federal authority in this respect, and that is the power of Congress to regulate interstate commerce. National authority under this provision of the Federal Constitution has been stretched to the limit. There were times in our constitutional history when thoughtful members of the bar were fearful that the constantly enlarging of Federal authority under the commerce clause might strike down completely the constitutional division of power between the nation and the states, but for the time being at least this question has been set at rest. Every argument which could be used to sustain the power of Congress to regulate the drilling and operation of oil wells was presented before the Supreme Court of the United States in the original Child Labor decisions. It was here held that the production or even the manufacture of every useful commodity at least was a matter for state and not national regulation. The court stated that to hold otherwise was to strike down the division of power between the states and the nation ordained in the Federal Constitution. The all-important observation was made that it was just as important for the Supreme Court of the United States to uphold the power of the states in proper cases as it was to uphold the power of the National Government.

Child Labor Precedent

Personally, I regard it as doubtful if the doctrine of the Child Labor case will ever be reversed. Right here, however, I wish to impress upon your minds several most important considerations which I put before you as a solemn warning. The Supreme Court of the United States is the final arbiter on all constitutional questions. Whatever protection we have in relation to our property rights depends upon the trained and patriotic judgment of the nine men in Washington who comprise our highest tribunal. Now, mark this, the Child Labor Case which gives you your present immunity from congressional control was a five to four decision, five justices holding the Child Labor Act unconstitutional, four expressing views to the contrary. If a single one of the majority justices had entertained a different view, then the oil industry and the production of every other commodity in the United States would have been within the regulatory power of the National Government.

Court Decisions

To emphasize this all-important consideration, it is but necessary for me to call your attention to two other decisions of the Supreme Court of the United States: The financing of the American Civil War was effected through paper currency made legal tender by act of Congress. This currency, through the vicissitudes of the war, depreciated greatly in comparison with gold, and the holders of debts contracted before the passage of the law on a gold basis were required to accept payment in a depreciated currency, thereby clearly losing part of their property.

Shortly after the war, a case involving the constitutionality of the legal tender enactments of Congress, so far as the same related to debts contracted on a gold basis before the passage of the enactments, reached the Supreme Court of the United States. Every state Supreme Court, excepting one, which had passed upon the question held these acts to be constitutional. This was the very general opinion of the bar and public opinion overwhelmingly supported that position. The thing to emphasize here is that when this case finally reached the Supreme Court of the United States it involved the most important economic question then confronting the American

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*Address at the dinner tendered Col. Charles A. Lindbergh by the Mid-Continent Oil & Gas Association and other organizations at Tulsa, Okla.

PULLING POWER OF OIL EXPOSITION SHOWN BY ATTENDANCE OF BUYERS

By James McIntyre

The tremendous pulling power of the International Petroleum Exposition in Tulsa has again asserted itself. In the face of a week or more of daily rain which at times assumed the proportions of a deluge, the immense exposition buildings were comfortably filled daily with interested oil men attracted there by the desire to see the latest inventions in industrial machinery and appliances, and to find the things that would help solve individual problems in the particular part of the industry in which their working hours are spent.

Throughout the nine days of the exposition—it was extended one day at the request of many oil men—whenever there was a letup in the downpour of rain, there was a general rush for the exposition grounds on the part of visitors attracted here by the show, and the supply men were kept busy attending to the inquiries of the oil fraternity from almost every field in the United States and from several foreign countries. Representatives were there from Mexico, Peru, Colombia, Holland, England, Germany and Rumania and executives whose names stand high in American oildom took the time off to pay the exposition a visit with their engineers and production superintendents.

It was a great show and whatever has been devised in the past two years intended to improve the methods of drilling for and producing oil or in converting the crude into manufactured products, was to be seen in one or another of the three big buildings or on the grounds outside. The outdoor exhibits, whenever the weather would permit, were always crowed and the technical and scientific display in the building set aside for it had many visitors.

It is regrettable that the weather was not good, but while thousands undoubtedly remained away on that account, the show enjoyed a good buying crowd. Many of the exhibitors who were heard from expressed themselves as well satisfied with results. They accepted the rain philosophically and were pleased with the size and quality of the crowds that rain could not keep away.

The exposition executives expressed themselves as well pleased. They consider the fourth exposition a success and are satisfied that practically all of the exhibitors this year will be back for the next exposition.

Oil men and equipment manufacturers generally were loud in their praise of the splendid work done by W. G. Skelly, president of the exposition, and J. Burr Gibbons, the general manager, to bring the big oil show to such a high standard of excellency. It seemed to be the consensus of opinion the exhibits this year were better than at previous expositions and that the displays as a whole gave a more comprehensive idea of the many improvements inaugurated in the methods of producing, refining, transporting and marketing petroleum and its products.

Visit of Colonel Lindbergh

The big event of the last half of the week was the coming to Tulsa of Charles A. Lindbergh, world-famous aviator and apostle of commercial aviation. Colonel Lindbergh attracted to Tulsa on Friday the largest crowd of out-of-town people that Tulsa has ever seen on one occasion. He made a short address outside of the exposition grounds in behalf of commercial aviation. In the evening a banquet was given in his honor in the Mayo Hotel under the auspices of the Mid-Continent Oil & Gas Association, the Tulsa Chamber of Commerce, the International Pe-

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Trend of Gasoline Tax Legislation

Growing Burden, With Overproduction and Low Net Return, Threat to Industry. Uniform Tax Law Suggested

By Frank E. Packard*
General and Tax Attorney, Standard Oil Co. of Indiana, Chicago

Taxation, that attribute of sovereignty whereby private property is taken for public use without compensation, has always been one of the most unpopular functions of government. Since the dawn of ordered society the problem of financing public activities has probably wrecked more dynasties, cut short the career of more ministers, driven more cabinets from power and thwarted the ambitions of more politicians than any other cause. How great ministers of finance like Wolsey, Richelieu, Hamilton or the younger Pitt, must have yearned for some popular method of separating the citizen from enough of his property to sustain the policies of their ministries. I presume no minister of finance in all the centuries even dreamed of a popular tax. His highest ambition was to find the least unpopular method of securing public revenue. It has remained for you gentlemen and your respective legislatures to discover a so-called popular tax.

When early in 1919, Oregon, Colorado and North Dakota enacted laws levying a tax of 1 cent a gallon on gasoline this alleged popular tax arrived. The idea has been adopted by 46 states and the District of Columbia. Of all the states in the Union, New York and Massachusetts remain a lonesome twain with tax-free gasoline. The idea is no respector of international boundaries and the tax has spread to all the provinces of Canada, except Saskatchewan.

Becoming Conscious of Burden

In spite of this astounding record, it is my honest conviction, based upon careful observation, that this tax is not a popular tax but only appears to be such because of the low price of gasoline and the desire for good roads and above all, because the people have never become conscious of its burden. There is evidence on all sides that they are becoming conscious of the burden they are bearing. That it is a real burden is evidenced by the fact that through it they paid in 1926 about $205,000,000 into state treasuries; that this year they will probably pay more than $240,000,000, and in 1928 in excess of $275,000,000. Our company alone paid, in 10 states, in 1926, $16,790,083 and will pay in excess of $18,000,000 this year and will probably pay $25,000,000 in 1928.

The first 2-cent tax was levied in Oregon in 1921 and the second in South Carolina in 1922. The average tax was approximately 1 cent until 1923, when the rapid spread of the tax, and the sharp increase in rates, may be said to have been fairly on its way. In 1919 and 1920 there were three and four states, respectively, levying a tax of 1 cent. In 1921 there were 12 states levying a 1-cent tax and Oregon came in with the first 2-cent tax. In 1922 there were 17 states levying a 1-cent tax and South Carolina joined Oregon with a 2-cent tax. In 1923, there were 15 states levying a 1-cent tax, 11 states levied 2 cents, 1 state 2½ cents and 8 states 3 cents. In the six years which have intervened since that date the increase of the tax has been astounding until in 1927 we find four states with a 5-cent gasoline tax, one state with a 4½-cent tax, seven with a 4-cent tax, two with a 3½-cent tax, 16 states with a 3-cent tax and 14 states with a 2-cent tax.

Increasing the Tax

Even this unsurpassed increase in the tax did not satisfy determined minorities in most of the states. Bills increasing the rates were introduced but were generally defeated. There are well-organized bodies of citizens in practically every state in the Union determined upon a higher gasoline tax. It seems probable, however, that this drive by good road enthusiasts and politicians seeking popular issues is being checked by a frank and serious consideration of the whole subject by the people.

Heretofore the oil industry has only grumbled at being made a tax collector and tax guarantor without compensation, but now as the average gasoline tax burden mounts and its rapid increase during the past six years is contemplated, there is not a little alarm as to whither we are drifting, and if the amount of the tax continues to increase, what will be the result to the industry. During the period of the evolution of this tax, conditions have been unusually favorable to the development of a high tax burden—a burden which many times during the past year in some states has reached the unprecedented figure of 80 per cent of the manufacturer's selling price of the product. I believe I am safe in saying that this period of complacency on the part of both the industry and the taxpayer is drawing to a close and that graver concern is taking its place as to what is to be the ultimate outcome both from the view point of the industry and the taxpayer.

It will be conceded that high-fixed charges, overproduction and low prices tend to destroy net return. The oil industry is going through a period of low prices, overproduction and low net return.

Cheapness a Factor

Fundamentally, too heavy a production has resulted in low prices and as the balance sheets of many oil companies eloquently testify, profits have altogether vanished or been turned into actual losses. The fact that gasoline is cheaper today than any other staple commodity is evidenced by the price statistics of the United States Bureau of Labor which shows that in 1926 it averaged only 18.1 per cent above that of 1913, while the average of all commodity prices in 1926 was 51 per cent above 1913. A survey of the price of commodities of the tabulation of the bureau shows gasoline to be cheaper today in comparison with other commodities, and in terms of the buying power of the dollar, than before the war. It stands at the very bottom of the price list of commodities widely and extensively used. It is the cheapest great staple commodity being consumed today by the American people. Even today the selling price of gasoline plus the abnormally heavy average burden does not bring the commodity up to a normal price. This probably is the outstanding reason why there has been no more clamor on the part of the public. On the other hand, until very recently the average burden was low enough that the industry did not serious consider the obvious fact that with a low price for the commodity, a very heavy tax must in part or in whole absorb the net return.

With both the producer and distributor attempting to dispose of their surplus, the market, if there can be said to be any market structure in the petroleum industry today, is constantly depressed and profits are caught between the anvil of irreducible costs of production, manufacture and distribution, and the hammer of fixed charges, and are being hammered out pretty thin. It will be conceded that the cost of the raw material and the cost of manufacturing are real and tangible factors which must be taken into consideration when arriving at the selling price of the commodity, no matter how variable they may be. On the other hand there are certain fixed invariable factors which must also be taken into consideration. The first great item is that of transportation, and, in the petroleum industry, the second great item today is the gasoline tax. There are spots on the map of the United States today where these two fixed charges amount to more than 10 cents; an amount considerably in excess of the manufacturer's selling price of the commodity. I do not believe I exaggerate when I say that in general these two fixed charges range from 3 to 8 cents a gallon. Probably the average fixed charge and the average manufacturing selling price during the past year would not be far apart.

Local Gasoline Taxes, Too

Not only does the industry face this unusually high state tax burden but the epidemic is spreading to the political subdivisions of the state. In some instances, cities are levying as high as 3 cents a gallon, and in many instances 2 cents in addition to state tax. This same commodity is subjected to inspection fees and to an ad valorem tax. Pumps are licensed, service stations are licensed and measuring devices subject to an inspection fee.

This brings us down to the distribution of the commodity to the actual consumer. The consumer expects the distributor to bring the commodity in quantities from one gallon up in a tank truck to his door no matter whether he lives in the great American desert or on top of a mountain, and in cities and towns, that palatial service stations be built and that along with a two-gallon purchase shall go free air service, free water service and any minor repairs that an automobile may need. All of this greatly enhances the cost of distribution.

I submit, in view of these facts, that it does not take a learned economist to guess that the oil industry is already paying a very large portion of these taxes out of its profits and, if the present condition in the petroleum industry continues, and the states continue to "pile on" the tax, that in many instances its profits will entirely disappear or be converted into actual deficits fraught with serious consequences to the industry. I do not believe that there is a gentleman here or a serious-minded moulder of public opinion in any of the states from which you came, who desires to seriously handicap or injure the petroleum industry, but I believe I am sounding a timely note of warning when I say that if the average of the gasoline tax burden continues to mount as it has in the past five years, that you will do that very thing.

Uneconomical Taxes

I confess that the question of the amount of tax is largely a local one and what might be considered reasonable in one state might be unreasonable in another state. I personally do not believe that a 4 or 5-cent tax is ever justified. Generally speaking, my experience indicates that 2 cents will secure all the revenue that a state can economically spend in building highways with any machinery which the legislature provides. As a rule, states are attempting to spend enormous sums of money with inadequate machinery of administration and the legislatures are steadfastly refusing funds for a greater business organization. I must repeat that I am of the opinion that we are more or less loco as a people upon this question of hard-surfaced roads and are carrying out ambitious programs entailing the expenditure of enormous sums of money which is to be raised to the jeopardy of the petroleum industry.

(Continued on Page 144)

*Before North American Gasoline Tax Conference, Columbus, Ohio.

FEWER OIL WELLS COMPLETED IN SEPTEMBER—NEW PRODUCTION OFF

September showed a marked falling off in the volume of new production from wells completed in the fields east of California. There was an increase of 14 in new wells, but a decrease of 40 in oil wells compared with the report for August and the new production was 304,668 bbls. as compared with 371,972 bbls. in August.

In new work there was a difference of only 6 in the total of rigs and wells drilling at the close of September, compared with the close of August, but there were 80 more wells drilling at the close of September, the deficit being in the number of rigs which fell off 86.

Following are the summaries by states and counties:

SUMMARY FOR SEPTEMBER

Wells Completed

Field—	Comp.	Prod.	Dry	Gas
Eastern	476	1,839	46	84
Central Ohio	49	186	5	35
Lima	33	402	8	3
Indiana	14	176	5	3
Illinois	19	133	10	2
Michigan	24	272	6	3
Kentucky	108	3,459	38	4
Tennessee	3	335	1	0
Kansas	78	5,449	25	5
Oklahoma	321	157,860	128	40
East Central Texas	5	1,575	1	0
North Central Texas	217	17,943	111	6
West Texas	70	68,669	17	1
Texas Panhandle	41	7,709	8	12
Gulf Coast	71	25,269	29	1
Southwest Texas	53	3,529	24	12
North Louisiana	66	3,954	29	21
Arkansas	21	1,074	7	2
Montana	75	1,208	30	16
Wyoming	35	3,253	3	7
Colorado	11	209	5	0
New Mexico	19	165	8	3
Utah	3	0	3	0
Total September	1,812	304,668	547	260
Total August	1,798	371,972	546	207
Difference	14	67,304	1	53

Summary of New Work

Field—	Rigs	Drg.	Ttl.
Eastern	106	350	456
Central Ohio	14	76	90
Lima	1	32	33
Indiana	4	62	66
Illinois	1	26	27
Michigan	3	49	52
Tennessee	0	31	31
Kentucky	3	119	122
Mississippi	11	19	30
Alabama	0	7	7
Florida	2	12	14
North Carolina	0	1	1
Oklahoma	142	1,009	1,151
Kansas	57	173	230
Texas Panhandle	19	171	190
West Texas	77	242	319
North Central Texas	75	388	463
Gulf Coast	26	140	166
Southwest Texas	23	148	171
East Texas	6	18	24
North Louisiana	42	110	152
Arkansas	14	37	51
Wyoming	18	122	140
Montana	21	102	123
Colorado	6	76	82
Utah	2	24	26
New Mexico	11	99	110
Total August	684	3,643	4,327
Total September	770	3,563	4,333
Difference	86	80	6

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carter	5	494	1	0
Creek	35	820	21	4
Grady	20	1,194	5	6
Kay	6	0	5	1
Muskogee and Wagoner	19	100	14	3
Okfuskee	5	1,770	2	1
Okmulgee	21	340	8	5
Osage	24	458	12	5
Pawnee	5	17	1	3
Payne and Lincoln	4	2,015	1	1
Pontotoc and Garvin	10	1,428	3	1
Pottawatomie	25	8,183	10	2
Seminole	118	137,731	36	0
Stephens and Cotton	7	75	3	3
Tulsa	3	20	1	1
Miscellaneous	14	3,215	5	4
Total September	321	157,860	128	40
Total August	325	231,253	113	25
Difference	4	73,393	15	15

Summary of Rigs and Wells Drilling

County—	Rigs	Drg.	Ttl.
Beckham	2	5	7

(Continued on Page 139)

California Has Put Its House in Order

General Trend of Production Will Be Downward During Remainder of This Year. Much Potential Output Shut In

By J. E. Eaton
Consulting Geologist

California is at this particular time perhaps the most orderly of the major oil districts, even though its model behavior may be only temporary. The enormous reserves and vast untested areas of the State make it a slumbering volcano as regards potentalities. It may be likened to a child, who, ho'ding a giant cannon-cracker in one hand and a bunch of matches in the other, resists the temptation to add to the general din.

The accompanying graph of California production is an extension of the one shown in The Oil and Gas Journal for July 7. This graph indicates that California has put its house in order for the balance of 1927, and perhaps well into the following year, but it is not to be taken as indicative of conditions during the latter part of 1928, or in 1929. It illustrates the service rendered the oil industry by a number of major California companies when on May 1 sufficient production was shut in to tide over a crisis. This shut-in was made in the face of declining revenues and security values, and was one of the most prompt and constructive steps in the history of the industry. Among the operators who contributed materially in one way or another, were the Shell, Union, and Standard oil companies of California, the Associated Oil Co, and the General Petroleum Corp.

California Under Control

The writer expects California production to continue the general decline into the year 1928, and to perhaps fall below 600,000 bbls. daily before the next large rise commences. The smoothed curve may start strongly upward in the latter part of 1928, but this event is not expected until the anticipated production from central San Joaquin Basin materializes and gets well under way.

An expected increase in California production in the far future is not apparent from current production figures, but is is well founded geogolically. The flood of oil from California in 1923 was occasioned by the development of the comparatively small central Los Angeles basin. The south-central part of the great San Joaquin Basin which is three times as large as all Los Angeles Basin, is at present practically untested, and is only beginning to be opened up. This large territory is indicated to be stratigraphical'y and structually s'milar to Los Angeles Basin, and a series of large new fields is probable.

It is not expected that the production of south-central San Joaquin Basin will be in proportion to its size, i. e., three times as large as that of Los Angeles Bas n, for many problems of geology and discovery too complex to be discussed here are involved, but it is to be remembered that this is the largest single part of California theoretically favorable for oil and that it is almost untested as regards scientifically located wells. The first large company to step basinward and drill a deep and carefully located test appears to have found a new field. We may be sure that this first apparent success will mean an intensive wi dcat campaign on the part of responsible and well-equipped companies. The development of south-central San Joaquin Basin has now passed into the hands of operators such as those who developed central Los Angeles Basin.

Odds Against the Wildcat

Rufus Pilcher, statistician for the Richfield Oil Co., recently remarked that it is perhaps a good thing for price structure in the oil industry that wildcatting is not more successful. According to the California State Mining Bureau, 1,461 wildcat wells were drilled in California between the years 1914 and 1926. All of the production discovered during this period was found by eight scientifically operated companies. More than 1,000 wildcat wells drilled by other companies, most of them located without reputable technical advice, were blanks. In as much as the wildcatting of only eight companies caused several flurries of overproduction during these years, it can readily be seen that if all of the wildcat wells drilled by the rank and file of oil companies had been carefully located, we would probably have had an overproduction of unprecedented amount.

The waste in wildcatting is enormous. Unscrupulous promotion propositions cause a part of this, but large losses are suffered by legitimate operators who drill in localities which are geologically unfavorable. Much of this latter loss could be saved. Not one in four wildcat wells drilled in California appears to have been located where there is any reasonable hope for oil. At least 1,000 wildcats in the State have been drilled in synclines, in areas where there is only a thin covering over metamorphic or igneous rocks, or where there is insufficient generative strata and drainage.

The writer has noticed a fundamental difference between the more successful and the more unsuccessful classes of operators when they seek technical advice. The former either ask that areas be recommended to them, or for an unbiased report on a tract of land. The latter form preconceived opinions regarding production in geolog cally unfavorable areas, and then expect the geologist to agree with them. The reputable technician, of course, refuses to do this. The quack, however, will strongly recommend almost any proposition, with the result that many of the favorable "geologic reports" secured by operators are trash. Some geologists do not accept work from inexperienced operators until these have been told all of the unfavorable factors and the long chances of wildcatting. Only sincere operators who pass this test are accepted as clients. It is an interesting comment on human frailty that scarcely one operator in five can stand to have the unvarnished facts presented to him. It is the men who go into oil conscientiously and with their eyes open, that form the backbone of the industry.

National Situation Dangerous

As may be seen from the attached graph, the production of crude oil in California for at least the balance of 1927 is indicated to be downward, and in keeping with readjustmnet. This condition is expected to continue into the early part of 1928, for such new fields as may boost production will not have much effect during that period. The smoothed curve which is shown projected, is corroborated by the lesser number of wells at present drilling in proven territory, and by the program of minimum development being followed by a number of the larger operators.

California has its house in order, and the present critical situation is squarely up to the Mid-Continent. The writer has in the past been optimistic—perhaps too optimistic—regard ng the national situation. In the face of recent developments, continued optimism is not warranted unless strong efforts are made to curb national production. The unfavorable situation caused by Seminole was one which could be partially overcome owing to the summer demand for gasoline, and to the probab'lity that the inevitable decline at that locality would coincide with the lessened demand of the refineries. We now have the prospect of an enormous production of flush oil in West Texas at a most unfavorable time of the year. This puts an entirely different light on the general situation.

Whereas ref ners were formerly disposed to store excess production in the hope that the overproduction was temporary, the prospect of continued surpluses may now incline them to draw for their needs on the heavy stocks which they are now carrying, and there may be a general reluctance to add to the already top-heavy storage situation. Demoralized prices would almost certainly result in such an event. It is not the temporary overproduction of a single area which now confronts the oil industry, but the cumulative effect of new excess production.

We have been amply warned of impending events. Leaders of the industry such as E. W. Clark, W. S. Farish, Walter Teagle and E. W. Marland, have called attention to the present aspect, and the trade press has been insistent in its pleas for better co-operation and organization with which to meet the problem. Other men, of recognized ability, have expressed the opinion that government control is advisable. Perhaps most of us feel that the time has not arrived for such a stringent measure, but such views emphasize the grave nature of the present situation.

Problem Must Be Faced

The writer believes that the solution of the oil industry's problem lies primarily within itself, and that the industry is not justified in throwing an enormous burden on the national Government until all other measures have failed. Such a step is not to be taken lightly,

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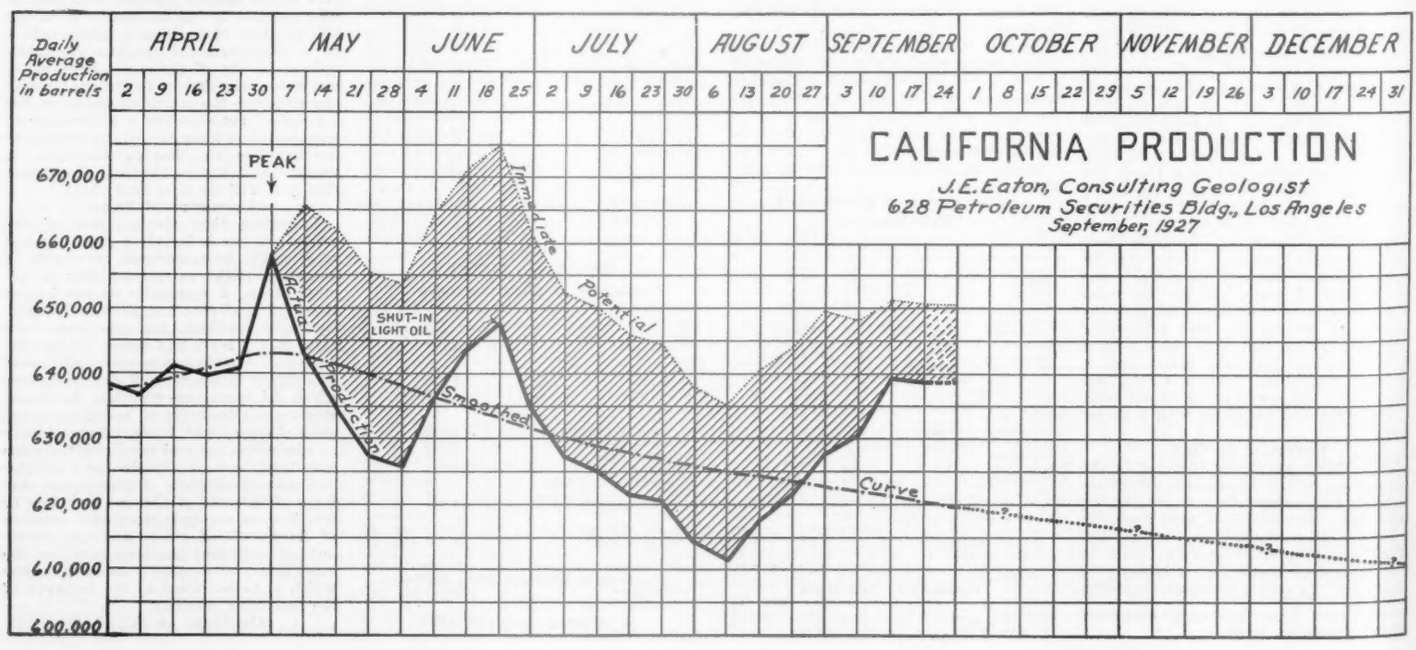

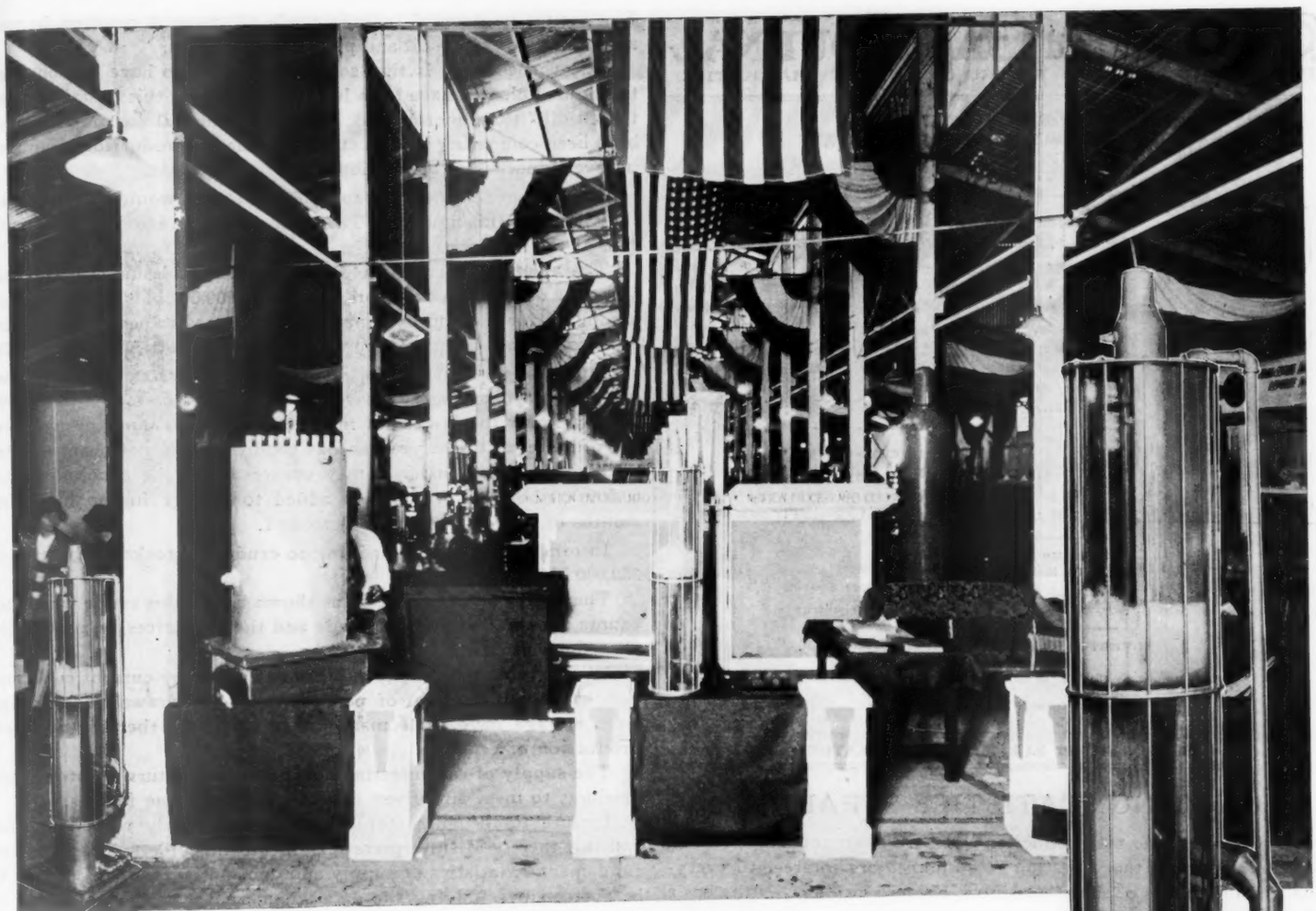

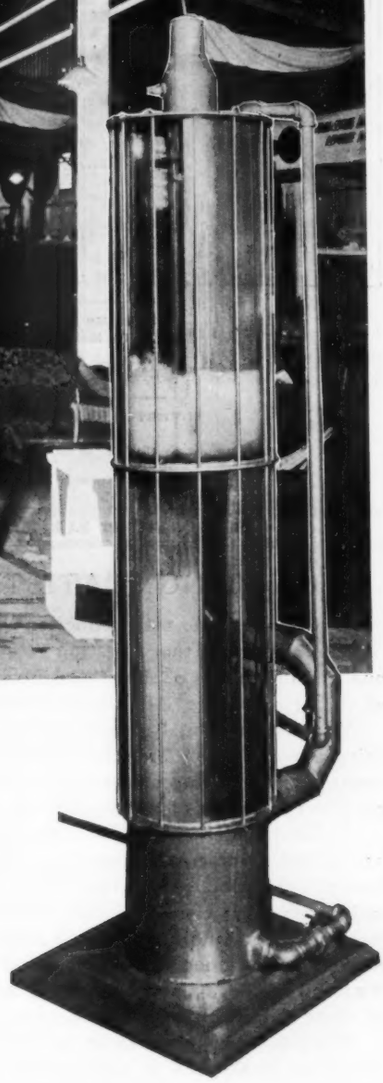

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GETTING STATISTICS STRAIGHT

How does crude oil production compare with consumption?

The answer to that question is of immediate interest to everyone in all branches of the oil business, because crude oil is the basis of the price structure of the entire industry.

The Government's statistics leave much to be desired, besides being a month old. The terms used are confusing and give a wrong impression, resulting sometimes in misinterpretation of the figures even to the extent of a complete reversal of the facts.

This misunderstanding and the misinterpretation built upon it has misled even some of those connected with the oil business who have not understood the situation as it exists in regard to the supply and demand for crude oil and refined products. In some sections this misunderstanding has been reflected in the daily newspapers which have assumed the position that there is no overproduction of crude oil while as a matter of fact there has been an overproduction of crude beyond the demand every month so far this year.

The proof of this statement is seen in the addition made to crude oil stocks at the end of each month as follows: January 1,752,000 bbls.; February 4,908,000 bbls.; March 4,696,000 bbls.; April 8,174,000 bbls.; May 8,710,000 bbls.; June 8,668,000 bbls.; July 8,810,000 bbls.; August 6,974,000 bbls.; a total added to crude oil stocks in the eight months of 52,692,000 bbls. These are the Government's figures.

That is the net result of the actual operations of supply and demand during those eight months, the amount added to storage after demand had been met by supply.

No method of figuring can get away from that fact. All other calculations must square with that concrete result.

The Government in the past two or three years, for some reason or other, has deemed it proper to make certain changes in its report which apparently are not fully understood by many who attempt to use these figures as a basis to judge conditions in the industry.

Since January, 1925, the Government has not given out in its reports any figures upon consumption comparable with the figures given for previous years.

The Government now issues what it terms a report on the "total supply of all oil" and a report on the "total demand for all oil."

The figures on supply include not only crude oil but natural gasoline and benzol and imports of crude oil and refined products. The figures on demand include crude oil, natural gasoline, benzol, and exports of crude oil and petroleum products.

The consequence is that some observers who have not checked the figures closely have been led to assume that this "total demand for all oil," three months old, indicated crude oil consumption and have been comparing it with current crude oil production, resulting in a very inaccurate conclusion.

A glance at the additions to crude oil stocks would have exposed the fallacy of this figuring. That is the one true index to the condition of the industry.

The annual report of the Bureau of Mines issued last August showed a decrease in crude oil stock of 25,000,000 bbls. in 1926 which accounted for the improved market in the greater part of that year, crude oil prices being higher than in any previous year since 1920.

This year the situation has been reversed. Instead of withdrawing crude from storage we have been adding it to stocks—52,692,000 bbls. of it for the first eight months, or twice as much as we drew out of storage all last year, and as conditions did not change materially during September it may conservatively be concluded that 60,000,000 bbls. of crude were added to storage in the first nine months of this year or up to October 1.

In other words, we are adding to crude oil stocks at the rate of 250,000 bbls. a day.

That is the actual situation as shown by surplus crude which accounts for the low price of crude and the low prices on practically all refined products.

With a refining capacity sufficient to meet any current consumption even in the period of peak demand, withdrawals of gasoline from storage have little market significance if there is an overproduction of crude.

The supply of raw material and the ability to turn it into refined products to meet any given demand are the prime factors.

Failure to recognize conditions may be partly responsible for causing them. Misinterpretation due to misunderstanding of the fundamental statistics of supply and demand is a positive danger to be avoided by studying the data which reflect real conditions.

Contrasting peak consumption with production at a wholly different period cannot give a correct picture of current conditions. It will not check with existing stocks of crude oil which is the fundamental factor.

There can be no remedy, no material improvement until the abnormal conditions are changed. The best thought of the industry is endeavoring to restore production to normal. Improvement will follow the progress in that direction.

Miscalculation and the misinterpretation resulting from it can only delay that progress.

In addition to the crude oil overproduction we must remember that gas oil and fuel oil are now potential gasoline.

Statistics of any industry must be intelligible to be of value. It is essential to know exactly what the figures represent. The Oil and Gas Journal has endeavored to be of special service to the oil industry by not only publishing but interpreting the statistics of the business.

The Government might assist materially by clarifying its figures with more precise statements of what they really represent in terms that anyone can understand. Official adoption of a system or method which is open to misconstruction should be avoided.

The figures on supply and demand should check directly with those on stocks. Complicated calculation on factors not understood by the general reader, no matter how desirable from a statistical standpoint, may be befogging and lead to conclusions which if given wide publicity may seriously affect the public understanding of the position of the industry.

The oil industry earnestly trying to get its case before the public cannot afford to be misunderstood or misrepresented.

The relative situation between crude oil supply and demand has always been the market barometer of the industry. The market strengthens when crude oil is withdrawn from storage and weakens when crude is being added to storage. It is all important that there should be no confusion as to actual conditions in regard to this vital factor in the industry's situation.

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Hour's Gauge Taken on Yates Field

Indicated Possible Initial Production of 170,000 Bbls. Daily. Big Deal in Undeveloped Winkler Acreage

By C. D. Lockwood
Staff Correspondent, North and West Texas

FORT WORTH, Tex., Oct. 3.—Gauging of all wells in the Yates Pool for the purpose of prorating pipe line runs held the interest of West Texas operators during the past week, while a sale of undeveloped acreage in Winkler County for $875 000 and the purchase of a tank farm site in the Crane-Upton area by the Prairie Pipe Line Co. also commanded attention. With seven new produc ng wells, making a total of 1.026 producers, West Texas averaged 190.679 bbls. daily during the past week, an increase of 3,790 bbls. North Texas declined 1,839 bbls. to a total of 152,915 bbls., so that the net increase of North and West Texas amounted to only 1,951 bbls. As usual nowadays, this week's figure for West Texas output represents a new all-time record.

To what heights the production of this great district could go if conditions justified the opening of wells already completed in Pecos County, and the drill ng in of others which are shut down near the pay levels in Winkler County, was demonstrated last week when each well in the Yates Pool was opened up for one hour. Official gauge tickets are not available at the time this is written, but reports from the field check closely, and according to the best figures 19 wells flowed a total of 6.935 bb s. in one hour. At that rate the field is now capable of producing 170,000 bbls. da ly, provided the wells could maintain their initial flow for a protracted length of time. Opinion is somewhat divided as to this proviso, and as a matter of fact nobody knows. It is pointed out, however, that 11 of the wells tested were allowed to flow through openings equivalent to a 4-inch line, or smaller, while eight were flowed through lines about the equivalent of a 6-inch. Many of these we ls have been pinched in under heavy back pressures for considerable periods and nobody knows exactly what this has done to the holes. They were not, of course, cleaned out for this test. Some reliable authorities are convinced that the water encountered on the east edge of the field is bottom water and that serious damage would result from opening the wells in the field to any great extent. Others believe that the wells would increase instead of diminish in size if a lowed to flow nearly open and that the daily production of the field would soar above the mark indicated by the one-hour gauges.

Pipe Line Situation

The pipe line situation, however, will prevent any answer to these questions for some time to come. Approximately 100 miles of the Ill nois Pipe Line Co.'s 8-inch line from the Yates Pool to Del Rio has been buried, leaving some 40 miles to finish up. When this line is completed, the field will have a total pipe line outlet of about 44,000 bbls., which will be apportioned among the producers on the bas s of the one-hour gauges.

In the meantime, five new wells have added 387 bbls. an hour to the field's total, on the basis of hourly gauges. Several other tests are also near the pay and 11 new locations were announced this week.

Red Bank Oil Co.'s No. 1 Smith, located in the NW of Section 24, Block 194, on the southwestern side of the pool, gauged 44 bbls. in one hour through one 4-inch line. This well has been kept pinched in to one 30-bbl. head daily since it was completed several weeks ago. Humb'e Oil & Refining Co.'s No. 1 Smith in the NE cor. of Section 36, Block 194, which was mentioned last week as an extension well, was flowing 87 bbls. an hour at total depth of 1,600 feet. It topped the pay at 1,425 feet. Roxana Petroleum Corp.'s No. 1 Tippett, SE cor. Section 102, and west offset to Simms Oil Co.'s No. 1 Smith, was still drill ng Monday at 1,385 feet and was flowing 80 bbls an hour. It topped the pay at 1,352 feet.

McMan and Marland's No. 3 Yates, south offset to Roxana's No. 1 Tippett, flowed 93 bbls. on a one-hour gauge and Monday made 546 bb s. through a five-sixteenths-inch choke. Same company's No. 4 Yates flowed 80 bbls. when gauged for one hour and Monday made 546 bbls. on a five-sixteenths-inch choke for 17 hours and a three-sixteenths-inch opening for seven hours. This well is a north offset to Humble's No. 1 Smith, mentioned above.

Water Conditions Unchanged

The water situation in the Yates Pool has remained practically unchanged except that Gulf Production Co. has nearly shut off the water in its No. 1 Thompson, easternmost producer in the field. Latest report on this well showed it flowing 450 bbls. through a quarter-inch choke against 400 pounds back pressure, and showing less than 1 per cent water at the well. Marland Oil Co.'s No. 1 Yates-A, when gauged for proration purposes flowed 377 bbls. of o l and 33 bbls. of water through one 4-inch line. Monday it made 645 bbls. through a three-eighths-inch choke and about the same percentage of water. Allsman & Bell's No. 1 River Bed is averaging about 92 bbls. daily flowing by heads through 2-inch tubing, with a water content of 5 per cent. No other wells have yet been affected by the sulphur fluid.

An unusual sale of undeveloped acreage was made during the past week by the Landreth Production Co. of Fort Worth when the Roxana Petroleum Corp. purchased an undiv ded half interest in 1,360 acres comprising 12 tracts located in Winkler County for a consideration reported to be $875,000, of which amount $775,000 was cash. Three wells are now drilling on this acreage and a fourth location has been announced. Under the terms of the contract Landreth has the operation of the property, but has stated he intends to drill only necessary offsets for drainage protection dur.ng the present market depression.

Several of these tracts, especially the SW of Section 29, B ock B 5, where one test is drilling and another location has been made; the W half NW of Section 45, Block 26, where the two wells are drilling adjacent to Southern Crude's north extension well; and the W half NW of Section 3, Block B-12, east of Southern Crude's No. 1-B, look almost "sure-fire." Several others, including the SW of Section 39, Block B-5, W half SE of Sect on 27, same block, W half SW and W half NW and E half SE and E half NE of Section 40, Block 26, and the W half NW of Section 39, same block, also have excellent chances of being "in the money" accord ng to present indications.

Winkler County Developments

Important deve opments may be expected in Winkler County at any time now, as a glance at the accompanying wildcat report will reveal. Southern Crude Oil Purchasing Co.'s No. 1 Gr sham-Hunter T-89-A in Section 35, Block B-5, encountered 10,000,000 feet of gas at 2,473-75 feet and was drilling below 2,500 feet. Humble Oil & Refining Co.'s No. 2 Hendricks, SE cor. NE Section 34, had 20,000,000 feet of gas at 2,385-90 feet and was drilling ahead. Twe ve new locations were also reported in Winkler County this week.

Several new lime tops and salt tops were likewise reached. Murchison Oil Co. and Cranfill Brothers' No. 1 Hendr ck-B in Section 35 topped the lime at 2,309 feet. Republic Production Co.'s No. 1-A in Section 45, Block 26, topped lime at 2.125 feet and made some gas. Roxana Petroleum Corp.'s No. 1-A in Section 45 topped lime at 2,428 feet also with a little gas. Landreth Production Co.'s No. 2 Hendrick in Section 45 topped it at 2,496 feet. Murchison, Marland & Cranfill Brothers' No. 3 in Section 35, Block B-5, topped salt at 1,260 feet. Cranfill & Reynolds' No. 2 in Section 28 got the salt at 1,271 feet. Humble's No. 3 in Section 34, Block B 5, topped salt at 1,362 feet.

Considerab'e excitement has been displayed in the northern Winkler County area due to the fact that Cranfill Brothers' No. 1 Bashara at the common corner of Sections 10, 11, 22, and 23, School Block 77, is supposed to have topped the salt at 1,100 feet. Some excellent geolog sts have accepted this depth as the top of the salt which would place it some 80 feet higher on the salt dome than Roxana and Llano's No. 1 Scarborough to the northwest. Other good geo ogists, however, say that the samples show top of salt to be 1,570 feet. Tme 1,100-foot depth is based on salt water and salt crystals in the slush pit.

Some rumors gained currency lately to the effect that Humble Oil & Refining Co.'s No. 1 Hendrick, Group 1, in Section 36, Block 27, northwest of the Hendrick Pool, had topped the lime about 2,750 feet. Latest report on this well showed it to be dr lling in anhydrite at 2,940 feet, or 117 feet below sea level. The lowest well in the Hendricks Pool, structurally, topped the lime 104 feet above sea level. This was Southern Crude's No. 2-C on the west side of the pool. Independent's No. 1, which is now off production, topped it at 105 feet above sea level.

Correction is hereby made of an error which crept into the wi deat report concerning Roxana and Llano's No. 1 Scarborough. This well has not yet been shot, but the shot is on the ground await-

WILDCAT OPERATIONS IN WEST TEXAS

Week ending October 1, 1927

Company, Farm and Location—	Remarks—
ANDREWS COUNTY	
Calvin & Bell's No. 1 Ratliff & Bedford, C NE, Sec. 16, Blk A-54	Drilling 430 ft.
J. S. Cosden's No. 1 Ratliff & Bedford, C SE Sec. 8, Blk. 73, Public School Land	Hole full fresh water 1,030 ft.; shut down for stem 1,095 ft.
Sartain Oil Co. et al's (was Deep Rock Oil Co.'s) No. 1 W. J. Harris, C SE Sec. 12, Blk. A-46, Public School land, elev. 3,167 ft.	Hole full fresh water 1,050 ft.; shut down 1,265 ft.
B. B. McKennon's (was Neff et al's) No. 1 J. S. Means, C SE Sec. 13, Blk. A-35, Public School Land	Shut down 1,020 ft. for 10-in. casing.
A. G. Carter & Zweifel's No. 1 Cowden, C SE Sec. 18, Blk. A-52, Public School Land Sur., elev. 3,156 ft.	Top salt 1,375 ft.; encountered pocket of air 3,635 ft.; drilling 4,215 ft.
BREWSTER COUNTY	
Cady & Keller's No. 1 Decles	New location; rig on ground.
Mid-Kansas O. & G. Co.'s No. 1 Turney, Sec. 77, Blk. 213, T. & St. L. Sur.	Drilling 375 ft.
Reese & White's No. 1 Kimbale, C NE Sec. 204, Blk. 9, G. H. & S. A. Sur.	Location.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 mi. S of Alpine	Shut down for bailer 1,025 ft.
Wilcox & Anderson's No. 1 Gage, Sec. 8, Blk. 300, T. C. R. R. Sur.	Shut down for 8-in. 1,000 ft.
COKE COUNTY	
W. H. Brown et al's No. 1 W. L. Foster, SE cor. Sec. 142, Blk. 2, H. & T. C. Sur., elev. 2,222 ft.	Running 8-in. 2,200 ft.
Danciger O. & R. Co.'s No. 1 Mrs. Byrnes, Clinton Sur.	Drilling 2,400 ft.
Lipan Oil Co.'s No. 1 S. M. Conner, Sec. 71, Blk. 2, H. & T. C. Sur.	Drilling 1,235 ft.
Lipan Oil Co.'s No. 1 E. C. Rawlings, Sec. 390, Blk. 1-A, H. & T. C. Sur., elev. 2,750 ft.	Shut down 2,736 ft.
CONCHO COUNTY	
The Exploration Co.'s No. 1 Hartgrove, Blk. 240, J. Schouch Sur., elev. 1,718 ft.	Junked hole 1,670 ft. (corrected depth); skidded machine 25 ft. north; drilling 200 ft.
CRANE COUNTY	
Marland Oil Co.'s No. 1 Union Land, E cor. of W ½ Sec. 28, Blk. 35, H. & T. C. Sur., elev. 2,298 ft.	Top salt 825 ft.; drilling 1,760 ft.
Duffey & Gault & Brown's No. 1 Cowden	Building rig.
Gulf Production Co.'s No. 2 W. N. Waddell	Total depth 3,500 ft.; building rig.
CROCKETT COUNTY	
George Anderson and Marland Oil Co.'s No. 1 University	Hole full sulphur water 1,800 ft.; one-half bailer oil 2,240 ft.; one-half bailer sulphur water per hour 2,475 ft.; drilling 2,510 ft., lime.
V. T. Bolin & Co.'s No. 1 P. C. Coates, NW cor. SW Sec. 4, Blk. 2, I. & G. N. Sur.	Shut down 2,110 ft.
Corbett & Gill's No. 1 Todd	Shut down 830 ft.
Corbett & Gill's No. 1 University	Shut down 720 ft.
J. S. Cosden, Inc., No. 1 Paul Perner, SW cor. Sec. 36, Blk. 2, I. & G. N. Sur.	Moving in material.
Gulf Production Co.'s No. 2 Powell-D	Top salt 1,060 ft.; shut down for repairs 2,495 ft.
Gulf Production Co.'s No. 2 G. L. Thompson, Sec. 71, Blk. 1, I. & G. N. Sur.	Shut down for repairs 110 ft.
Epeneaur et al's No. 1 Noelke, SW Sec. 30, Blk. GG, G. C. & S. F. Sur.	Drilling 620 ft.
George A. Henshaw and Geyer Oil Co.'s No. 1 Noelke-Murphy, 660 ft. S and E of NW cor. Sec. 10, Blk. PP, T. C. Ry. Sur., A-5,143	Reset casing 1,460 ft., cemented and shut down.
C. A. Jones et al's No. 1 Powell	Drilling 635 ft.
Magnolia Petroleum Co.'s No. 2 Shannon	Show oil 2,385-90 and 2,992 ft.; total depth 4,100 ft.; fishing 20 joints 8-in. casing.
Newman Oil Co.'s No. 1 B. C. Clark	Location.
William Shaffer et al's No. 1 University, C SE SE Sec. 9, Blk. 47, University Sur., elev. 2,344 ft.	Total depth 2,344 ft.; plugged back to 2,208 ft.; shot 10 qts. 2,170-95 ft.; shut down 2,344 ft.
William Schaffer et al's No. 2 University, 1,350 ft. N and 2,610 ft. E of SW cor. Sec. 9, Blk. 47, University Land	Top salt 1,060 ft.; first oil show 2,190-96 ft.; second 2,325-29 ft.; about 30 ft. oil in hole; drilling 2,530 ft.

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ing removal of a string of tools from the hole. One string has already been fished out and the other is now being worked on. When that is done the shot of 200 quarts will be placed.

Church-Fields Pool

In the Church-Fields-McKinley Pool, Gu'f Production Co.'s No. 39 J. T. McElroy was shot September 26 at 2,827-30 feet and flowed 67 bbls. the first hour, 577 bbls. the first 11 hours, and 1,080 bbls. the first 24 hours. No. 41 topped pay at 2,795 feet and was shot with 220 quarts from 2,795-2,908 feet. It flowed 70 bbls. the first hour, 77 bbls. the second hour, and 750 bbls. in 24 hours. It made 337 bbls. before the shot.

Prairie Pipe Line Co.'s new tank farm s'te in Upton County is located in Section 31, Block 42, T. & P. Survey, T-5-S. It is due south of Odessa and northeast of the Church-Fields-McElroy Pool. The purchase was made from Kloh, Morgan & Rumsey, trustees for the Texas & Pacific Land Trust.

Following are some important West Texas locations just announced this week:

In Pecos County, Mid-Kansas & Transcontinental's No. 4 Yates-B, 471 feet north and 270 feet west of SE cor. Section 61, Block 1, I. & G. N. Survey; No. 5, 1,092 feet west and 811 feet north of same corner; No. 6, 1,343 feet north and 1,733 feet west of same corner; No. 7, 1,373 feet south and 2,390 feet east of NW cor. same section; No. 8, 1,373 feet south and 3,460 feet east of same corner; No. 9, 785 feet east and 811 feet north of NW cor. Section 60, but located in Section 61. Same companies' No. 9 Yates-A is 1,353 feet north and 1,320 feet east of the most westerly SW cor. of I. G. Yates Survey, A-8195.

Marland Oil Co.'s No. 2 Yates-A is 660 feet south and 270 feet west of NE cor. Section 60; No. 3 is 1,028 feet south and 1,239 feet west of same corner; No. 4 is 1,990 feet west and 1,028 feet south of NE cor. same section. No. 2 Yates-A is digging cellar; No. 3 is moving in rig and No. 3 is a location.

Cummings and others' No. 1 Blackstone & Slaughter is located in the center of N half Section 23, Block 129, T. & St. L. Survey, Pecos County.

Winkler County Locations

In Winkler County, Republic Production Co.'s No. 4 Hendricks is 1,650 feet from the south and west lines of Section 45, Block 46. Texon Oil & Land Co.'s No. 3 Hendricks-A is NW cor. SE, Section 41, Block B-5. Humble Oil & Refining Co.'s No. 3 Grisham-Hunter is NW cor. NE NE Section 34, Block B-5; No. 4 is NE cor. NW NE, same section; and No. 5 is NE cor. same section. Landreth Production Co.'s No. 2 Hendrick is 990 feet north and 330 feet west of SE cor. SW Section 29, same block. Roxana Petroleum Corp.'s No. 2 Hendricks-B is 990 feet north and 330 feet east of SW cor. SE, Section 29. Pure Oil Co.'s No. 3 Grisham-Hunter is in the NE cor. SW of Section 41, Block B-5; No. 3 Grisham-Hunter-B has been changed to SW cor. SE Section 34, Block B-5. Turman & Maxwell's No. 1 Ida Hendrick is in the NE cor. E half NE Section 29, Block B-5. George M. Church and others' No. 1 Ida Hendricks is in the NW cor. W half NE, same section.

In Reagan County, Skelly Oil Co.'s No. 1 University is located 330 feet each way out of the SW cor. Section 33, Block 8, University Land.

In Runnels County, Caudle & Malone's No. 1 Erben is 550 feet from the north and east lines of Section 2, R. A. Smith Survey. H. B. May's No. 1 Schneider is located 4,600 feet from the SW line and 150 feet from NE line of Section 378, John Wall Survey.

In Borden County, Marland Oil Co. made location for No. 1 J. C. and G. E. McDavid, C SW, Section 156, Block 25, H. & T. C. Survey.

In Jeff Davis County, J. K. Hughes Developing Co.'s No. 2 J. Z. Means is in C SE of Section 431, Block 4, H. & T. C. Survey.

In Hudspeth County, Lockhart and others' No. 1 Gardner & Mosely is in the C NW of Section 12, Block 18, Public School Land.

In Crane County, Prairie Oil & Gas Co.'s No. 5 State-Lasseter is 990 feet from north line and 1,650 feet from east line of Section 47, Block 30, University Land; No. 6 is 1,650 feet from north and east lines of same section.

In Howard County, Marland & Texon's No. 3 Settles is rigging up in the C SW of Section 134, Block 29. Marland Oil Co.'s No. 1 A. Richardson is located in the C NW of Section 12, Block 32, T. & P. Survey, T-1-S.

STATE OF CALIFORNIA FORCES CONSERVATION—LATE FIELD NEWS

By L. P. Stockman

LOS ANGELES, Calif., Oct. 4.—When operators in the Ventura Avenue Field lifted the lid on September 1 after an arbitrary four months' restriction and opened up the production which had been shut in on May 1, there did not appear to be much chance of the various companies agreeing on another curtailment program but the State of California subsequently stepped into the breach and practically served an ultimatum demanding the immediate curbing of natural gas waste under penalty of being subject to the California waste gas act of 1911. The result was that a committee was chosen by operators at Ventura Avenue a short time ago for the purpose of deciding upon a procedure for the conservation of the gas supply of the Ventura Field.

This committee, which is known as the Ventura Conservation Board, is now functioning and has made recommendations to the operators which have already resulted in a reduction of about 10,000,000 feet of gas per day. A series of important conferences has been in progress during the greater part of the past week and while no definite announcement has yet been made it appears almost certain that crude oil production will again be restricted as any further reduction of gas production is bound to be reflected in a corresponding drop in oil production.

Ventura Avenue is a high pressure field and the large flowing wells characteristic of this district have a very unfavorable gas-oil ratio, gas production in many instances being several times that which might be expected under normal conditions. The opening up of curtailed production on September 1 and the completion of something like 10 new wells during the past 60 days has resulted in a gas production considerably in excess of the maximum which casinghead plants could utilize. The result has been that nearly 50,000,000 feet of wet natural gas has been allowed to blow off into the air. It was this waste of wet gas which resulted in the California Railroad Commission being advised by its gas and electric department that the situation deserved the serious attention of the proper constituted authorities to the end that either the waste gas act be applied or remedial legislation initiated as soon as possible. Attention was directed to this report of the California Railroad Commission on page 55 of the September 15 issue of The Oil and Gas Journal.

The series of conferences which have been going on for the past week may result in the pinching in of from 5,000 to 10,000 bbls. daily of crude oil production at Ventura Avenue although this is by no means a certainty because of the difficulty in beaning down high pressure wells without endangering future recovery. The delay in solving this present wastage at Ventura Avenue has been due to the inability of the committee in arriving at an equitable basis of curtailment on account of field conditions. Wells producing abnormally high yields of natural gas do not, as a rule, offset similar producers and if both wells are shut in the curtailment of one company would not be equal to the other. That major operators are confident of success, however, is evidenced by the fact that the Standard Gasoline Co. has temporarily suspended work on the projected enlargement of its casinghead plants at Ventura. An early decision is expected in regard to gas waste at Ventura Avenue with all indications pointing to a sympathetic curtailment in crude oil production as a result of the desire of operators to prevent further waste of wet nat-

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CEDAR CREEK POOL DOES NOT LOOK LIKE AN IMPORTANT FIND

By Special Correspondent

MEXIA, Tex., Oct. 1.—The Cedar Creek Pool, south of Mexia, does not look any better with the passing of the days. The wells that stopped flowing, as reported in last week's review of the field, are still dead and the wells since brought to a near-completion stage are not showing encouragingly. The Rycade Oil Corp.'s No. 1 R. P. Ward is shut down after it showed salt water in the Woodbine sand, and the Sun Oil Co.'s No. 1 Dugger cored shale at 2,887-96 feet and is shut down for orders. Late reports on several completed wells show Reiter, Lewis and others' No. 2 Ward making 227 bbls. a day; Transcontinental Oil Co.'s No. 1 E. W. Lewis, flowing two 20-bbl. heads in 24 hours and the Why Not-44 Oil Co.'s No. 1 E. W. Lewis flowing 182 bbls. a day.

The "hot" well in Boggy Creek now is the Humble company's No. 2 Spencer and Clemmons, in Anderson County, which is drilling sandy chalk at 3,308 feet. In the same county and area Humble company's No. 1 J. R. Russell is drilling hard chalk at 3,752 feet after topping the chalk at 3,484 feet. Nine miles west of Palestine Cosden and associates' No. 1 Douglas is drilling at 4,500 feet.

Cherokee County

On the Cherokee County side of Boggy Creek the Humble Oil & Refining Co.'s No. 2 Reynolds Mortgage Co. is drilling broken lime at 4,460 feet. Same company's No. 3 Earl and Ragsdale is being rigged; No. 2 Elliott & Clark topped the chalk at 3,354 feet and is drilling shale and lime at 4,423 feet. Two miles southeast of Ponta Magnolia Petroleum Co.'s No. 1 Summers, backed up from 4,374 feet and tested salt water at 4,330 feet and is now shut down.

Three miles northeast of Pittsburg A. C. Rogers' No. 1 Boyd is a rig. In Cass County and 12 miles east of Kildare Mid-Kansas Oil & Gas Co.'s No. 1 Rogers is drilling shale and boulders at 1,940 feet. In the Marion County Field, J. O. Lynch's No. 2 Mebone-Styles was completed in sand at 2,346-50 feet, pumping 50 bbls. of pipe line oil. In Panola County, Magnolia Petroleum Co.'s No. 6 Lewis made 36 bbls. initially on the pump at 1,998 feet.

Rusk County

Nineteen miles southeast of Henderson in Rusk County The Texas Company's No. 1 Schultz is drilling shale at 2,250 feet. McCurrie and associates' No. 1 Sparks in the same couunty is being reamed to the bottom at 2,148 feet to core. The hole heaved while the crew was trying to get a core at that depth. Magnolia Petroleum Co.'s No. 1 Pickering Lumber Co., 6 miles northeast of Shelbyville in Shelby County has been bailed to the bottom at 2,673 feet and shut down. The well had an oil show at that depth. It is reported it bailed salt water, however, the report was not verified. East of Center and in the same county W. M. Sebastian's No. 1 Pickering Lumber Co. is shut down at 2,830 feet.

DEATH OF W. E. STICH

INDEPENDENCE, Kans., Oct. 4,—W. E. Stich, father of Mrs. E. W. Sinclair, of New York City, died at his home here this morning.

NORTH CENTRAL TEXAS COMPLETIONS

WICHITA FALLS DISTRICT

Archer County

Koll-Tex Oil Co.'s No. 6 J. H. White made 20 bbls. at 1,450-51 feet. O'Neil & Carter's No. 1 Wilson was dry and abandoned at 1,375 feet. Royal Petroleum Co.'s No. 17 Wilson was a 45-bbl. well at 1,540-44 feet.

Camp & Hill's No. 1 Griffin was a duster at 2,004 feet. Wayne Hammon's No. 3 Kemp & Kell was dry and plugged at 800 feet.

Consolidated Oil Co.'s No. 1 Norred was a failure at 1,351 feet. So was Long and associates' No. 1 Hudson, at 1,430 feet. And also Perkins, Cullum & Litchfield's No. 1 Anderson, at 1,447 feet.

Cooke County

J. R. Abernathy's No. 2 Dayton was abandoned as dry at 1,908 feet after topping the Ellenberger lime at 1,907 feet. Bell Oil Corp.'s No. 2 Koelzer made 54 bbls. at 1,685-88 feet. The location for Cooke County Development Co.'s No. 1 K. of C. was abandoned.

J. W. Hooser's No. 1 Hyman cemented 6-inch at 1,479 feet and drilled out plug and continued drilling to 1,490 feet. Oil sand was from 1,480 to 81½ feet, but no production was found. The well will be drilled deeper.

Lynch, Stahl & Burress abandoned the location for No. 6 Koelzer. Moorefield and others' No. 1 Stelzer made 4 bbls. at 1,694-1,707½ feet. Neff & Knox' No. 1 Esker was plugged at 1,736 feet.

Oil Operators' Trust Co. abandoned their No. 1 Hofbauer at 2,139 feet after topping the Ellenberger lime at 2,120 feet; No. 4 Koelzer swabbed 75 bbls. from sandy shale at 1,661-66 feet; No. 2 Luke swabbed 65 bbls. at 1,645-54 feet, total depth 1,663 feet.

The location for Reed & McMurry's No. 1 Farmer Labor was abandoned. Sun Oil Co.'s No. 5 Hacker made 55 bbls. from broken sand at 1,660-77 feet. Tucker & Fox abandoned the location for their No. 1 Harris.

Foard County

Humble Oil & Refining Co. and Navarro Oil Co. are preparing to abandon their No. 1 McAdams at 4,192 feet.

Jack County

Three dry holes comprise the list this week: Craig, Lowrie & Walton's No. 1 Maxey was abandoned at 520 feet; Madden & Hunt's No. 1 Sloan, at 537 feet, and the Texas Development Co.'s No. 1 Hodge, at 1,007 feet.

Knox County

Humble Oil & Refining Co. is preparing to plug its No. 1 Goode at 4,543 feet. The Texas Company's No. 1 Teague has a hole full of water and is preparing to abandon at 3,705 feet.

Montague County

Continental Oil Co.'s No. 8 Jones was completed for 17,000,000 feet of gas at 585-633 feet, total depth 791 feet. Same company's No. 1 Loy and others-A was dry and abandoned at 915 feet.

Throckmorton County

Moore and associates' No. 1 Matthews was dry and abandoned at 2,002 feet.

Wichita County

Magnolia Petroleum Co.'s No. 2 Waggoner-A was a duster at 1,760 feet. Sheldon and others' No. 6 Frankl-A pumped 60 bbls. from sands at 1,643-54 and 1,656-61 feet after plugging back from 1,664 feet. Verschoyle & Vaughn's No. 1 Ancell-A pumped 80 bbls. and some water at 1,713-15 feet. Wallace's No. 3 Burnett was dry and abandoned at 2,200 feet. T. R. Wolf's No. 6 Daume pumped 40 bbls. at 1,824-28 feet.

Wilbarger County

Milham Corp.'s No. 14 Waggoner-B pumped 31 bbls. from lime at 2,542-49 feet. Phillips Petroleum Corp.'s No. 2 Waggoner-PP pumped 25 bbls. at 2,391-

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Bowers Area, Gray County, Promising

Said to Look Like One of the Best Pools in the Entire District. Oil Reported to Be 44 Gravity

By James H. Dameron
Staff Correspondent, Texas Panhandle Fields

AMARILLO, Tex., Oct. 3.—Another big drop in daily estimated production and some excellent new wells in the Bowers area south of the Pampa Pool in Gray County featured the Texas Panhandle news during the past week. There were 15 completions on the list, but the daily output dropped 3,690 bbls. to a new low point for the year of 89,765 bbls. The amount of oil was made by 1,366 wells.

In the Bowers area of Gray County, where the Gulf Production Co. brought in a well flowing 85 bbls. an hour about the middle of September, Delaney and others' No. 1 W. Jackson, located in the NW cor. of the E half SW of Section 88, Block B-2, was flowing Saturday at the rate of 230 bbls. an hour, thereby making this area look like one of the best pools ever opened in the Panhandle because the Delaney well is half a mile south of the Gulf Production Co.'s 85-bbl.-an-hour completion. The Delaney test found the first granite wash pay at 2,938-44 feet and the second pay at 2,982-85 feet. The flow started at the rate of 70 bbls. an hour and suddenly increased to 230 bbls. hourly. The first eight hours' gauge Saturday was 1,500 bbls.

The gravity of this oil is reported from the field to be 44.6 degrees, or the highest in the entire district. Sinclair Pipe Line Co. is taking the oil and is laying a larger line to care for the increased flow.

The owners of this well are Mike Delaney, R. B. Everidge, Si Rieger, and some other Amarillo citizens.

In Section 92, west of the Gulf well, Gibson Oil Corp. also brought in a nice producer. Its No. 1 Bowers had the first granite wash pay at 2,965-3,007 feet and the second pay at 3,070-85 feet, where it flowed 35 bbls. an hour with 3,000,000 feet of gas.

Decline in Hutchinson

Most of the production decline this week was attributed to Hutchinson County, where the decline amounted to 4,900 bbls. Gray County gained 1,400 bbls., Carson County lost 85 bbls., Wheeler County lost 90 bbls., and Potter County lost 15 bbls.

Roxana Petroleum Corp.'s No. 1 Cockrell, in Section 3, Block B-3, southern Hutchinson County, which flowed more than 8,400 bbls. a couple of weeks ago after deepening, was again deepened slightly this week and its output, which had fallen to 2,500 bbls. daily, increased to 3,607 bbls. for the first 24 hours ended Thursday morning. It was drilled just 2 feet deeper to a total depth of 2,865 feet.

Sherman County Disappoints

One of the Panhandle's most interesting and promising tests, that is, promising a week ago, doesn't look so good just now. This is Hagy & Harrington and Marland Oil Co.'s No. 1 S. F. Flores in Sherman County. It looked promising, due to the fact that it found the top of the lime at a favorable elevation above sea level. But at 3,445-50 feet it encountered some water, and Monday morning was reported drilling at 3,735 feet with nothing in the hole that can be sold for profit. Elevation at the surface is 3,467 feet, so there isn't much hope left. However, the hole is to be carried down to 4,000 feet if no production is found before that depth is reached.

In Bailey County, Gibson Oil Corp. and others made location for No. 1 Webb Miller, 200 feet each way from NE cor. Labor 15, League 186, Swisher County school land. A rig is up.

In Lamb County, Dan Freel's No. 1 Ellwood is located in CWL Section 9, Block T, T. A. Thompson Survey, directly on the line between the sections.

In Hale County, Gouldy & Stone's No. 1 Kitteral is located 300 feet each way from the SE cor. NW of Section 65, Block A-3, G. C. & S. F. Survey. Bailey & Young's No. 1 Thomas is 2,640 feet south and 600 feet west of NW cor. Section 18, Block J-D, E. L. & R. R. Survey, but located in Tract 36, Block B, of the R. M. Thompson Survey, S. F. 1,042. This tract is a narrow strip adjoining Section 18 on the west. It has been spudded with a machine and shut down.

TEXAS PANHANDLE COMPLETIONS

Carson County

Empire Gas & Fuel Co.'s No. 2 Burnett, Section 23, Block 5, was completed for 20,000,000 feet of gas at 2,440-2,697 feet; No. 3 Burnett, Section 44, Block 5, made 18,000,000 feet of gas at 2,390-2,585 feet, total depth 2,670 feet; No. 9 Burnett, Section 50, same block, was good for 27,000,000 feet of gas at 2,285-2,438 feet; and No. 10 Burnett, Section 52, Block 5, was also completed for 23,000,000 feet of gas at 2,600-42 feet.

Gray County

Magnolia Petroleum Co.'s No. 1 Archer, Section 174, Block 3, flowed 820 bbls. the first 24 hours, 770 bbls. the second day, and 540 bbls. the third day from pay at 3,265-71 feet. It was then deepened 1 foot to total depth of 3,272 feet, but this didn't help its production, and the well was completed. It had its first show of gas at 2,975 feet, 6,000,000 feet of gas at 3,065 feet and a show of oil at 3,138 feet.

Midwest Exploration Co.'s No. 1 J. A. Hood, Section 33, Block 3, was shot with 180 quarts at 2,953-87 feet, and as a result swabbed 107 bbls. the first 12 hours. It now makes 180 bbls. in 244 hours.

Purple Sage Oil Co.'s No. 1 E. B. Johnson, Section 8, Rockwall County School Land, has been abandoned at 3,208 feet. This well had a show of gas at 2,515 feet, a show of oil at 2,660-95 feet, and was shot with 300 quarts from 2,646 to 2,694 feet, but without success.

Roxana Petroleum Corp.'s No. 1 Combs & Worley was swabbing 75 bbls. from granite wash and lime at 3,007-20 feet, total depth 3,085 feet. This is in Section 34, Block 3. It had 200 feet of salt water in the bottom and was plugged back from 3,085 feet to 3,020 feet. Same company's No. 4 Worley, Section 39, Block 3, was shot with 200 quarts at 3,042-90 feet and afterward flowed 61 bbls.

The Texas Company's No. 1 W. J. Brown, Section 137, Block 3, which was completed in May of 1926 for 52 bbls., is drilling deeper at 3,500 feet and now makes 4 bbls. of salt water per hour.

Wilcox-Pampa Oil Co.'s No. 2 Combs & Worley in Section 40, Block 3, produced 77 bbls. initial at 2,975-3,050 feet.

Hutchinson County

Cockrell-McIlroy Oil Co.'s No. 3 E. Cockrell was completed for 15,000,000 feet of gas at 2,640-2,964 feet, total depth 3,060 feet. It had a show of oil at 2,974 feet. McIlroy Oil Co.'s No. 1 E. Cockrell in Section 2, Block Y, also made 5,000,000 feet of gas at 2,625-75 feet and was completed. McIlroy and others' No. 2 E. Cockrell, in Section 4, Block B-3, was plugged back from total depth of 3,108 feet to 3,098 feet and completed for 50,000,000 feet of gas at 2,700-2,952 feet.

McMillan Oil Corp.'s No. 1 J. M. Sanford-Pool in Section 82, Block 46, swabbed 40 bbls. of oil and 10 bbls. of salt water following a 20-quart shot at 3,010-50 feet.

Phillips Petroleum Co.'s No. 2-A Kingsland-Gibson, in Section 4, Block Y, swabbed 125 bbls. after a 120-quart shot at 2,807-47 feet, total depth 2,852 feet. It swabbed 100 bbls. before the shot.

Wheeler County

H. H. Vaughn and others' No. 1 J. D. Cuddeback in Section 2, Block 24, H. & G. N. Survey, was completed for 23,000,000 feet of gas at 1,850-1,910 feet.

TEXAS PANHANDLE PRODUCTION OF MAJOR COMPANIES
Week ending October 1, 1927

Company—	Wells	Bbls.	Ave.
Hutchinson County			
Amerada Pet. Corp.	10	465	46.5
Derby Oil Co.	11	548	49.8
Dixon Creek Oil	43	4,549	105.5
Empire G. & F. Co.	26	970	37.3
Gulf Prod. Co.	98	6,763	69.0
Hughes, J. K., Dev. Co.	22	756	34.3
Marland Oil Co.	56	1,917	34.1
McMan O. & G. Co.	25	939	37.5
Midwest Exp. Co.	25	2,066	82.6
Pantex	9	575	64.0
Phillips Pet. Co.	241	20,224	83.9
Prairie and Phillips	73	3,607	49.4
Prairie O. & G. Co.	9	310	34.4
Prairie and others	9	878	97.5
Pure Oil Co.	5	721	144.2
Roxana Pet. Corp.	10	3,460	346.0
Skelly Oil Co.	29	1,000	34.4
The Texas Company	2	303	151.5
White Eagle O. & R. Co.	24	1,092	41.3
Totals	726	51,143	
All others	276	17,967	
Grand totals	1,002	69,110	
Carson County			
Empire G. & F. Co.	9	622	69.1
Gulf Prod. Co.	21	375	17.8
Magnolia Pet. Co.	3	395	131.6
Marland Oil Co.	23	878	38.2
McMan O. & G. Co.	11	479	43.5
Prairie O. & G. Co.	10	1,267	126.7
Roxana Pet. Corp.	15	922	61.4
Skelly Oil Co.	10	1,539	153.9
The Texas Company	18	373	20.7
Totals	122	6,850	
All others	38	1,760	
Grand totals	160	8,610	
Gray County			
Empire G. & F. Co.	8	494	61.7
Gulf Prod. Co.	16	2,324	145.7
Humble O. & R. Co.	13	531	40.8
Magnolia Pet. Co.	22	924	42.0
McMan O. & G. Co.	10	464	46.4
Marland Oil Co.	1	40	40.0
Midwest Exp. Co.	1	72	72.0
Phillips Pet. Co.	7	446	63.7
Prairie and others	19	1,639	86.2
Pure Oil Co.	9	372	41.3
Roxana Pet. Corp.	4	518	129.5
The Texas Company	8	300	37.6
Wilcox-Pampa Oil	29	1,848	63.7
Totals	147	9,972	
All others	16	788	
Grand totals	163	10,760	

WILDCAT OPERATIONS IN PANHANDLE

Week Ending October 1, 1927

Company, Well, Farm Name, Section and Block—	Remarks—
ARMSTRONG COUNTY	
Meadows et al's No. 1 E. D. Harrell, C Sec. 100, Blk. A-6, A. & G. Sur.	S.D., 4,200 ft. for line.
United Oil & Trust Co.'s No. 1 J. P. Reck, Sec. 162, Blk. 4, H. & G. N. Sur.	Spudded and temp. abd., 298 ft.
BAILEY COUNTY	
Gibson Oil Co. et al's No. 1 Webb Miller	New loc.; rig.
Humble Oil & Renning Co.'s No. 1 W. H. Fuqua, con. E. half Sec. 117, Blk. A, Melvin, Blum & Blum, Sur.	Drlg., 500 ft.
BRISCOE COUNTY	
C. S. Rice's No. 1 J. C. Anderson, SE cor. NW NW, Sec. 22, Blk. B-3, B. S. & F. Sur.	S.D., 1,630 ft.
CARSON COUNTY	
Amatex Dev. Co.'s No. 1 E. S. Polling, Sec. 22, Blk. 2-Y.	S.D., 2,110 ft.
Empire G. & F. Co.'s No. 4 Burnett estate, Sec. 44, Blk. 5, I. & G. N. Sur.	Rigging up.
Empire G. & F. Co.'s No. 5 Burnett estate, Sec. 50, Blk. 5, I. & G. N. Sur.	Spudding.
Empire G. & F. Co.'s No. 6 Burnett estate, Sec. 52, Blk. 5, I. & G. N. Sur.	New loc.; rig on ground.
Magnolia Pet. Co.'s No. 5 fee 244	Drlg., 890 ft.
The Texas Company's No. 1 J. C. McConnell-B	Set 10-in., 1,960 ft.
Marston Oil Co.'s No. 1 J. L. Noel	S.D., 3,064 ft.
Navajo Oil Co.'s No. 1 E. S. Polling, Sec. 22, Blk. 2-Y	Set 6-in. 2,496 ft; fish., 2,712 ft.
Panhandle Northern Oil Co., Sec. 63, Blk. 2, T. T. R. R. Sur.	Cellar.
Stubblefield et al's No. 1 E. Cooper, SW cor. NE Sec. 5, Blk. 9, I. & G. N. Sur.	Small show oil, 3,019 ft; drlg., 3,065 ft.
Vitek Oil Co.'s No. 1 J. H. Eller, NE cor. NW Sec. 200, Blk. 3	S.D., 900 ft.
Willis et al's No. 1 Burnett Estate	Rotary; drlg., 850 ft.
CASTRO COUNTY	
Colorado O. & R. Co.'s No. 1 M. Slemmons, SW cor. Sec. 73, Blk. M-17, B. S. & F. Sur.	Rig blown down.
Mystery Oil Co.'s No. 1 J. I. Crum, SE cor. NE Sec. 233, Blk. M-6, S. K. & K. Sur.	S.D., 510 ft. for casing.
CHILDRESS COUNTY	
Brookins et al's No. 1 Mrs. Givens, 600 ft N and W of SE cor. Sec. 676, W. & M. W. Sur.	Spudded and S.D.
Continental Oil Co.'s No. 1 B. P. Smith, C NE, Sec. 14, Blk. 9	T.D., 2,450 ft; 1 bail. water per hr.
Hoover & Calloway's No. 1 O. L. Tucker, Sec. 736, Haggard Sur.	Spudded and S.D.
C. L. Sloane et al's No. 1 B. P. Smith, Sur. 49, F. P. Knott lands	Set 6-in. pipe at 2,902 ft; S.D., 3,000 ft.
COTTLE COUNTY	
Exploration Co.'s No. 1 Richards	Spudded and S.D.
DALLAM COUNTY	
James et al's No. 1 fee, Sec. 9, 47½	S.D., 2,870 ft; temp. abd.
Wood Bros. et al's No. 1 Capitol Synd., Sec. 19, Blk. 17	Drlg., 3,800 ft.
Marland Oil Co.'s No. 1 A. M. James, C SW W half, Sec. 31, S. H. McElreath Sur.	Fish., 1,700 ft.
Marland Oil Co. et al's No. 1 Capitol Synd., Sec. 34 Blk. 18, Capitol Synd. land	Fish., 2,480 ft.
DEAF SMITH COUNTY	
Fullen & DeGrace's No. 1 Mrs. R. A. Hindley, Sec. 47, Blk. K-8	S.D., 520 ft.
Red Hill Oil Corp.'s No. 1 Barrett, Sec. 93, Blk. K-4	S.D., 710 ft.

(Continued on Page 124)

UNIVERSITY ROYALTIES TOTAL $7,046,450 NOW

AUSTIN, Tex., Oct. 3.—The total receipts of the University of Texas during September from oil royalties was $257,625.50, exclusive of a payment of $29,000 made by the Tidal Oil Co. which had to be returned for correction. Including this sum, the total receipts from royalties of the University from August production was $286,625.50, as compared with $268,157.75 for the previous month. The royalty payments for the past month were based on a price of 82 cents a barrel for oil from the Reagan County Field and 60 cents a barrel on oil from the Crane-Upton County Field. Payments received by the University during September were as follows:

Southern Pipe Line Co., $5,467.85; Magnolia Petroleum Co., $7,709.65; Humble Oil & Gas Co., $38,415.73; Texon Oil & Land Co., $26,131.79; Pecos Oil Co., $17,359.86; Big Lake Oil Co., $79,438.85; Atlantic Oil Co., $69,782.91; Prairie Oil & Gas Co., $6,482.73; The Texas Company, $796.34; Gulf Production Co., $6,696.82.

The permanent fund of the University, derived from oil royalties, now amounts to $7,046,450. All of this sum is invested in United States bonds.

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Little River Pool Area Probably Small

Proration Being Made Effective There and Elsewhere in Greater Seminole Area. Independent Gets Big Producer

By J. L. Dwyer
Staff Correspondent, Oklahoma Fields

With the Little River wells flowing 75 per cent of their potential output during the past week, and the daily production of the entire Seminole area passing the 460,000-bbl. mark, the proration agreement faced a critical period for a few days, and it was thought that the importation of a referee with a 14-second count from Chicago would be necessary to sustain it and keep the output from again passing the 500,000-bbl. mark.

A conference held on Monday of this week attended to the matter, which is covered elsewhere in this issue.

The Little River wells showed that there is a potential output of 65,000 bbls. in that area at present, and current developments also tended to strengthen the belief that the pool will not resemble the other Seminole pools in the matter of area. The Little River Pool was delimited in the southeast direction during the week when the Superior Oil Corp.'s No. L. Soketheche, NW cor. SE NE Section 1-7-6, found salt water in the Wilcox sand and was plugged back to the Simpson sand, from which it is producing about 400 bbls. daily. This is a severe blow to the Little River Pool, which is now defined on three sides. To the northwest is the dry hole of the Gypsy Oil Co., SE cor. NE SW Section 35-8-6. To the southwest the Barnsdall Oil Co.'s well, SE cor. NW Section 2-7-6, is also dry in the Wilcox; and now comes the Superior dry hole to the southeast. Just where the direct south limits of the pool will be placed are problematical, as the wells drilling in this direction have not attained sufficient depth to render any direct information available regarding the structural conditions; but the disappointing showing of the Amerada Petroleum Corp.'s No. 1 Nitey, just south and one location west of the discovery well, has influenced the thought that little production will be found further south.

Northwest Looks Better

The trend of production has been extended to the northwest during last week by the completion of the Amerada Petroleum Corp. and the H. F. Wilcox Oil & Gas Co.'s well in the SE cor. NW NE Section 35-8-6, a quarter mile to the north of the Blackwell Oil & Gas Co.'s lease. This well found the Wilcox sand 4,267-74 feet, and flowed 80 bbls. an hour initially. To the east, this well is offset by a well of the Gypsy Oil Co., which is making 1,300 bbls. after coming in with an initial output of 2,100 bbls. The Amerada-Wilcox well is reported to be 80 feet higher than the Gypsy well, and it makes the northwest side of the pool look much better, although it is cut off by a dry hole half a mile to the north which is thought to limit the productive area.

Considering the eccentric nature which Little River has displayed thus far, it is possible that the pool will cover not more than 800 acres in area.

The output of the Greater Seminole area ranged from 450,000 to 462,000 bbls. during the past week, with 840 wells completed. The swelling in the fields' production is due chiefly to the wells which have been completed in the Little River territory, as the remaining pools of the field have done little with the exception of the Earlsboro Pool which had a startling completion in the Independent Oil & Gas Co.'s No. 3 Bruner, NW cor. SW NE. Section 10-9-5. This well found the Wilcox sand 4,375-78 feet, and began flowing at the rate of 500 bbls. an hour. The first 24 hours it produced 9,200 bbls. and the second 24 hours, 8,800 bbls. It came as a surprise in a region where interest had been permitted to wane for a few weeks. It will not only revive interest in the north central part of the Earlsboro Field, but its output may be duplicated by the other wells which are drilling in this part of the field, and the slight decline which Earlsboro has registered during the past 10 days may be stopped, and a higher average attained for the next few weeks. The Earlsboro Pool has dropped to 141,000 bbls. from the 150,000 bbls. which has been recorded for the past few weeks. There are sufficient wells drilling close to the Independent's No. 3 Bruner to give a rapid rise to the Earlsboro production should they have as prolific sand conditions as the Bruner well.

On the east side of the Earlsboro Pool, the Tidal Oil Co.'s No. 4 Barker, NW cor. SE NE, Section 12-9-5, had an initial output of 3,100 bbls. daily from the Wilcox sand 4,237-48 feet. This well comes in a part of the field which has been favorably regarded, although it was doubted if the sand would be found productive quite this far east.

The decrease in the number of operations in the Oklahoma fields continues each week, and at this time there are probably fewer wildcat wells drilling in the State than at any period during the past three years.

Seminole Production

The production of the Greater Seminole area on September 30 was as follows:

Little River

Company and Farm—	Wells	Prod.
Amerada:		
Nitey	1	1,875
Blackwell:		
Nitey	4	10,133
Gypsy:		
Campbell	1	385
Pattey	1	1,278
Ind. Terr.:		
Dungan	1	1,824
House, M. A.	1	2,021
House, W. E.	1	2,275
Jackson	1	2,286
Nitey	2	5,692
Reed	1	1,276
Mid-Cont.:		
Wadsworth	3	2,990
Prairie:		
Dugan	1	1,130
Total	18	32,166

Bowlegs

Amerada:		
Rasco	8	5,446
Atlantic:		
Baker	4	1,955
Fleet	4	1,312
Grayson	2	2,247
Jones, H.	3	140
Atlantic & Denver:		
Jones, C.	1	1,479
Barnsdall:		
McNac	1	50
Murrow	4	1,869
Carter:		
Bowlegs	3	2,110
Burden	1	495
Harjoche	6	1,990
Hilly	1	1,455
McGeisey	1	0
Walker	2	925
Wise	11	8,920
Jones	1	2,295
Empire:		
Lacy	6	1,332
Wise	2	2,022
Gypsy:		
Bowlegs	1	535
Brown	1	100
Cumsey	4	1,530
Grayson	2	2,472
Walker	8	3,914
Wise	3	397
Indep.-Marland:		
Coker	1	366
Ind.-Terr.:		
Barnett	2	1,167
Billington	3	1,356
Bowlegs	8	3,373
Davis	3	2,442
Fay	4	3,717
Goforth	10	3,126
Livingston	11	8,707
Lizzie	2	699
Walker	8	1,991
Wilmont	4	2,378
Work	1	430
Youngblood	4	802
Magnolia:		
Hammond	1	0
McCulloch:		
Bowlegs	4	112
Mid-Cont.:		
Baker	4	3,980
Bowlegs	1	855
Hutke	1	5
Minnehoma:		
Bowlegs	4	860
Prairie:		
Gahagan	4	1,175
Harber	7	3,950
Jones	1	1,345
Templeton	1	2,950
Whitney	4	210
Pure:		
Reed	16	9,902
Strothers "D"	2	1,142
Strothers "E"	1	5
Strothers "F"	1	636
Roxana & Houston:		
Taylor	6	2,421
Shaffer:		
Lacy	3	910
Sinclair:		
Adam	1	0
Bowlegs	1	110
Cumsey	2	4,192
Harjo	5	3,635
Jones	4	7,675
Taylor	4	4,565
Walker	4	2,090
The Texas Company:		
Reed	8	7,175
Tidal:		
Grayson	3	1,295
Harjoche	4	2,375
Twin States:		
Jones	1	945
Total Bowlegs	242	141,745

Earlsboro

Amerada:		
Anderson	4	3,170
Cowden	5	2,125
Rodgers	2	4,675
Barnsdall:		
Brown	3	3,080
Bruner, F.	1	0
Bruner, N.	1	2,850
Cudio, C.	1	27
Davis, D.	3	2,477
Davis, J.	2	252
Davis, M.	3	2,251
Gibson	6	2,307
Hearn	1	22
Hooley	1	11
Ingram	2	2,150
Pack	4	1,256
Peter	4	423
Sango	1	154
Sebolka	1	2,624
Smith	1	6
Sullivan, H.	2	1,587
Sullivan, Harjo	2	66
Wasatke	3	3,179

SHOWING OF OIL IN WILDCAT IN LOST SPRINGS DISTRICT

By J. L. Dwyer
Staff Correspondent, Kansas Fields

A showing of oil in a wildcat well north of the Lost Springs district was the most important news of the week in Kansas. The showing was found in D. I. Hall and others', of Wichita, No. 1 Dunlop, NE cor. SE NE Section 31-15-4, which is in Dickinson County, close to the Marion County line. The chat was found 2,313-37 feet, and the hole is reported to have filled up 400 feet with oil. As cavings were in the hole at the time, the real value of the well is not known. The well is 5 miles northwest of the city of Herrington.

In the Lost Springs district, Fred C. Frank and others' No. 1 Kutter, SW cor. SE Section 15-16-4, had a showing of oil from 2,341-43 feet.

The battle of the Oxford townsite in Sumner County, where the oil operators and lease owners have been holding legal battles with the city authorities, was broadened in scope during the past week, and the railroad interests have now entered the fray. One oil producer held a lease upon the railroad right of way, and when he attempted to drill upon this land the rig material and drilling equipment was removed during the night, presumably by railroad employes. The oil operator and his drilling crew went to the site the next morning and placed the rig timbers and equipment back at the location stake and resumed their work. At last reports there had been no fatalities in this round, which was declared slightly in favor of the oil operator.

Chase County

Basom and others made location for No. 1 Evans, SW cor. NE NE Section 12-22-9.

Coffey County

Arkansas Fuel Oil Co.'s No. 1 Burk, NW cor. SW Section 23-22-13, had sand at 1,803-09 feet and made 25 bbls. after it was shot with 40 quarts.

Cowley County

McNabb and others have the rig on the ground for No. 2 Robertson, NE cor. NW NW Section 22-32-4. Hull and others' No. 1 Fuller, C N half Section 32-31-7, is dry and abandoned at 3,606 feet.

Elk County

Seeley and others' No. 3 Donnall, C SE NW Section 12-30-9, is a dry hole at 2,540 feet. Union Gas Corp.'s No. 2 Glascock, C SE SW Section 11-31-10, was completed for 300,000 feet of gas in sand at 1,090-95 feet.

Arkansas Fuel Oil Co. has a machine at the location for No. 1 Young, SE cor. NE Section 17-29-10. A machine is also on the ground for No. 3 Glascock, NE cor. SW SW SE. Section 11-31-10.

Greenwood County

Manhattan Oil Co.'s No. 4 Sheppard, SW cor. Section 2-22-10, is rigging up. Transcontinental Oil Co.'s No. 1 Pixlee, NE cor. Section 10-22-10, is rigging up. Manhattan Oil Co. made location for No. 5 Sheppard, NW cor. Section 11-22-10. Skelly Oil Co. made location for No. 1 Warrenburg, NE cor. NW Section 24-22-10. Empire Gas & Fuel Co. has the rig on the ground for No. 17 Duby, SW cor. NE NW Section 23-22-11. Jennings and others made location for No. 1 Hollis, NW cor. SW, Section 5-22-12. Simmons & Rhodes made location for No. 1 Bowles, SE cor. NW Section 15-24-13. Rogers and others have the rig up for No. 1 Standard, Lot 5, Block 54, Section 34-25-10. Ballard, Patton and others have the rig on the ground for No. 1 Fair Grounds, NE cor. SE NE Section 2-26-10. Wahn and others' No. 1 Old, Lot 4, Block 44, Section 3-26-10, is drilling at 375 feet.

Roxana Petroleum Corp.'s No. 3 Sheets, SW cor. NW NE Section 23-22-11, has been completed for 100 bbls. in sand at 1,872-94 feet. Polhamus and others' No. 5 Trylor, SE cor. SW SW Section 35-25-10, is a 45-bbl. well producing from sand at 1,997-2,019 feet. Rogers and others' No. 1 Clopton, SW cor. NE Section 2-26-10, has been completed for 75 bbls. in sand at 2,002-22 feet.

Morris County

Rock Creek Oil & Gas Co.'s No. 1 Cessman, SW cor. NE Section 24-17-9, has been abandoned at 1,800 feet.

Osborn County

Davis and others have the rig on the ground for No. 1 Pruter, SE cor. SW Section 30-9-15w.

Reno County

Phillips Petroleum Co.'s No. 1 Rowland, NE cor. Section 21-22-5w, is dry and abandoned at 4,024 feet.

Sumner County

Roxana Petroleum Corp.'s No. 4 Shore "B," NE cor. NW SW Section 25-31-2e, was shot with 60 quarts in sand at 1,845-1,900 feet and made 50 bbls.

Woodson County

Reeser and others' No. 1 Morgan, SW cor. NE NE Section 13-25-15, is dry and abandoned at 1,415 feet.

"Overproduction is the direct result of too much drilling" is the statement made at the Conference of leading oil executives in New York City the week of May 8th To many this may appear a simple, obvious fact

Yet it cannot be too clearly understood that regulation of over-production *must begin and end in the oil field* The refinery is the place where crude oil, having been removed from the ground, must be made to yield its maximum gasoline content The refinery should be the last place in the world to practice regulation except only regulation of wasteful operating methods such as using three barrels of crude when two barrels will serve the needs

Universal Oil Products Company
Owner of the Dubbs Process
310 South Michigan Ave
Chicago, Illinois

Carter:		
Payne	2	2,430
Sango	2	365
Continental:		
Spencer	4	8,420
Crosbie:		
Bryant	2	2,010
Empire:		
Barker	1	0
Edmundson	3	4,197
Gypsy:		
Bora	2	0
Bruner	3	4,757
Carter	6	3,305
Earl	1	257
McFarland	2	0
Noble	3	9,802
Peter	4	1,360
State	4	145
Strain	1	0
Independent:		
Bruner	4	12,500
Sullivan	4	4,014
Knapp	3	1,499
Gaines	2	10,625
O'Dell	4	2,750
Interocean:		
Payne	1	0
Magnolia:		
Bryant	4	1,785
Cowden	2	662
Edmundson	2	1,562
Holmsley	6	6,515
Ingram	1	52
Lena	3	189
Seay	4	1,723
Simpson	4	945
Sparks	6	4,519
Mid-Continen.:		
McCumber	7	1,965
Mid-Kansas:		
Anderson	1	0
Phillips:		
Dunnaway	1	35
Graham	6	1,279
Prairie:		
Baker	1	50
Davis	3	2,170
Graham, C.	2	3,250
Graham, O.	4	6,665
Stidham	9	12,486
Roxana:		
Bayliss	1	7
Hearn	1	31
Spencer	2	3,890
Sinclair:		
Foreman	1	17
Hollins	3	2,675
Skelly:		
Spencer	2	12,480
Anderson	1	100
The Texas Company:		
Brown	4	2,560
Rodgers	1	7,405
Wilmont	4	240
Tidal:		
Watkins	4	1,745
Twin State:		
Barker	1	1,635
Hearn	1	1,850
Total Earlsboro	203	184,060

Seminole

Carter:		
B. Carter	2	240
J. Carter	3	45
F. Carter	3	190
Creamer	2	45
R. Cudjo	4	650
W. Cudjo	2	5
Gilliland	2	320
Grisso, M.	1	480
Grisso, W.	6	1,135
Knapp	3	845
Killing, M.	12	10,465
Killing, G.	4	1,265
Lukes		1,635
Ponder	2	40
Simpson	3	200
Strother	4	815
Vierson	4	400
Amerada:		
Fixico	4	1,202
Killing	4	457
Rentie	3	1,069
Atlantic:		
Cudjo, N.	3	620
Barnsdall:		
Carter	9	3,342
Henry	2	369
Jones	4	1,022
Empire:		
Gross	2	608
Wilson	2	360
Gypsy:		
Butler	3	659
Carter	8	1,362
Cudjo	7	622
Fixico	5	2-4
Harjo	3	1,070
Wolf	6	160
Independent:		
P. Fixico	3	540
Harjo		360
Independent and Garland:		
T. Fixico	8	933
Independent and Interocean:		
Jones	4	524
Indian Territory Ill.:		
Allen	1	312
Bowlegs		3,131
Fleet	1	414
Gooden	4	413
Harjo	4	852
James	4	996
Reed	3	37
Kingwood:		
Johnson	3	1,284
Magnolia:		
Born	1	150
Franks	4	872
Mid-Continent:		
Rentie	9	1,500
Tayeche	7	395
Mid-Kansas:		
Jacksey	1	47
Pressley	1	10
Wilkins	1	418
Phillips:		
Strothers	3	235
Philmack:		
Butler	3	2,215
Prairie:		
Gross	5	70
Mason	1	430
Spencer	1	15
Strother	8	1,080
Pure:		
Strother, A.	17	3,302
Strother, B.		2,220
Strother, C.	1	133
Roxana:		
Harber	2	273
Lashley	2	73
Sinclair:		
Carter	2	30
Cudjo, A.	6	985
Cudjo, B.	4	1,280
Dicey	2	817
Fixico	4	1,175
Slick:		
Cudjo	3	776
Franks	8	1,475
Gilbert, Sam	3	3,316
Tiger	1	91
Superior:		
Cudjo	4	756
Texas:		
Mayhue	1	310
Strothers	2	15
Tidal:		
Carter	5	775
Fixico	8	557
Harjo, D.	1	1,705
Harjo, T.	6	285
Mahardy	2	205
Tayeche	2	40
Turman:		
Cudjo	4	769
Grisso	1	207
Jones	4	1,052
Total	323	71,701

Searight

Carter:		
Davis	7	4,855
Frazier	5	5,130
Kiker	1	35
Mandler	2	55
Scott	1	40
Amerada:		
Johnson	1	...
Strother	1	1,466
Gypsy:		
Cudjo	3	840
Mid-Continent:		
Grayson	6	1,010
Soloche	2	1,135
Prairie:		
Cannon	1	10
Carter	1	...
Houck	1	7
Kincaid	7	520
Wiemer	1	20
Wilson	5	6,486
Pure:		
Aldridge	2	1,805
Roxana:		
Strother	4	2,795
Sinclair:		
Polly		
Twin State:		
Varnum	1	620
Wilcox:		
Chupco	6	4,957
Total	58	31,786
Total Little River	18	33,166
Total Bowlegs	242	141,794
Total Earlsboro	201	184,060
Total Seminole	323	71,701
Total Searight	58	31,786
Grand total	838	462,507

Carter County

McBride and others' No. 1 Goodwin, SE cor. SW NW, Section 2-1s-4w, an old well deepened, has been abandoned at 3,528 feet. Magnolia Petroleum Corp.'s No. 1-B Pollock, SE cor. NW SE, Section 14-1s-3w, was drilled to 3,830 feet and abandoned. Wirt Franklin & the Prairie Oil & Gas Co.'s No. 6 Pruitt, NE cor. NW NW, Section 3-2s-3w, is pumping 21 bbls. from a series of sands 2,280-2,921 feet. Magnolia Petroleum Corp.'s No. 8 Swartz, NW cor. NE, Section 26-2s-3w, has been abandoned at 5,122 feet.

Creek County

Sinclair Oil & Gas Co.'s No. 2 Long, SW cor., Section 9-18-7, is drilling deeper at 2,600 feet. Jackson & Wise's No. 2 Thomas, SE cor. SW NW, Section 13-17-10, is a rig on the ground. Murta & Cole have the rig on the ground for No. 1 Froe, NE cor. SW, Section 35-16-10. The Texas Company has the rig up for No. 1 Strip, SE cor. NE, Section 2-16-11. Independent Oil & Gas Co. made location for No. 2 Wolfe, NE cor. SW NE, Section 18-14-10. Mid-Continent Petroleum Corp. has the rig on the ground for No. 1 Harjo, SW cor. NE NE. Section 18-14-10.

Olean Petroleum Corp.'s No. 2 Harjo, SE cor. NW NE SW, Section 13-17-8, came in for 100 bbls. in sand 2,272-97 feet. Dixie Oil Co.'s No. 5 Francis, CSL SW SW, Section 5-17-10, was completed for 50 bbls. in the Wilcox sand 2,969-3,015 feet. The Pontiac Oil Co.'s No. 8 Fulsom, NE cor. NW SW, Section 13-17-10, is a 500-bbl. well in the Dutcher sand 2,460-94 feet. The Texas Company's No. 1 Baker, NE cor. SE, Section 14-17-10, is making 55 bbls. from the Red Fork sand 1,884-1,929 feet. Skelly Oil Co.'s No. 2 Yellowhead, SW cor. SE NW, Section 32-17-10, was completed for 35 bbls. in the Dutcher sand 2,695-2,713 feet. Devonian Oil Co.'s No. 4 Fulsom, CSL SE NE, Section 5-16-11, an old producer, has been abandoned at 1,907 feet.

Garfield County

Sinclair Oil & Gas Co.'s No. 3 Banger-ter, CNL NW SE, Section 26-22-4w, Garber Pool, has been abandoned at 2,560 feet.

Hughes County

Berry Petroleum Co.'s No. 5 Alexander, C NW SE, Section 4-9-9, Papoose Pool, was deepened at 4,275 feet and abandoned. Burke Greis' No. 1 McGrit, NE cor. NW NE, Section 15-8-9, is dry and abandoned at 3,450 feet.

Kay County

Larutan Fuel Co. is rigging up a machine for No. 4-A Woods, SE cor. NE NW, Section 30-27-1w. No. 3-A Woods, NE cor. NW, Section 30-27-1w, has been shut in for 1,000,000 feet of gas in sand 723-30 feet. Sinclair Oil & Gas Co.'s No. 1 Hall, SE cor. NW, Section 19-17-1w, has been completed for 684,720 feet of gas in sand 3,500-10 feet. Charles Balph and others' No. 1 Rembe, C NE NW, Section 29-27-1w, is a dry hole at 3,623 feet. Boucher and others' No. 1 Sands-yellow, NE cor. NW NE, Section 34-25-2, is dry and abandoned at 4,445 feet.

Muskogee County

Link Oil Co.'s No. 2 Austin, CEL SE NE, Section 32-15-15, is drilling at 250 feet. J. W. Hale and others have a machine out for No. 2 Timberlake, NE cor. SW SE, Section 6-14-19. The machine is at the location for No. 1 Kell, NE cor. NW, Section 7-14-19.

J. Henigman and others' No. 1 Francis, CSL NW SE, Section 1-14-18, is dry at 929 feet. Sunray Oil Co.'s No. 8 Crittenden, NW cor. SW, Section 5-14-19, is a 75-bbl. well in sands 712-33 feet and 735-48 feet.

Osage County

Simon and others made location for No. 4, SE cor. NW NW, Section 31-29-12. Indian Territory Illuminating Oil Co.'s No. 100, NW cor. SE NE, Section 27-27-10, is rigging up to deepen from 1,998 feet. No. 51, CEL NW, Section 25-26-11, is an old well at 1,800 feet for which a machine is being moved in to deepen. M. & T. Oil Co. made location for No. 4, SE cor. SW SW, Section 34-23-9. Oklahoma Natural Gas Corp. has a machine on the ground for No. 775, SE cor., Section 6-21-12. A. D. McDonnell made location for No. 1, SE cor. SW, Section 6-21-9.

Indian Territory Illuminating Oil Co.'s No. 379, NW cor. NE NE, Section 17-27-11, was completed for 2,000,000 feet of gas in sand 723-58 feet. No. 373, NW cor. NE NW, Section 3-26-11, has been shut in for 2,000,000 feet of gas in sand 1,779-1,814 feet. No. 218, SW cor. SE SE, Section 11-26-11, is dry and abandoned at 2,258 feet.

Okmulgee County

Sheldon Oil Co. and others have the rig on the ground for No. 3 Skelton, CNL SW SE, Section 15-13-12. G. T. Roberts moved a machine out for No. 4 Belisle, CNL SE SE, Section 16-15-11.

Josey Oil Co.'s No. 1 Stubblefield, SW cor., Section 28-12-11, is dry and abandoned at 3,985 feet. F. D. Misner's No. 3 Carter, CSL SW NE, Section 10-15-14, was completed for 20 bbls. in sand 984-1,000 feet.

Pontotoc County

W. R. Ramsey has the rig up for No. 1-B Butler, NE cor., Section 30-5-8. The rig is being built for No. 1-B Patterson, NE cor. NW NW, Section 29-5-8. Material is on the ground to build the rig for No. 1-A Patterson, NW cor. SW SW, Section 20-5-8. The rig is up for No. 1-B Milner, NW cor. NE SW, Section 17-5-8.

Pottawatomie County

Barnsdall Oil Co.'s No. 2 Holey, SW cor. NW SE, Section 4-9-5, Earlsboro Pool, has been completed for 13 bbls. on the pump, producing from the Wilcox sand 4,320-27 feet. Magnolia Petroleum Corp.'s No. 1 Adkins, SE cor. NE, Section 24-7-3, is a 50-bbl. well in the Hunton lime 3,765-3,826 feet.

Seminole County

Independent Oil & Gas Co. has the cellar dug for No. 5 Sullivan, SE cor. NE, Section 10-9-5, Earlsboro Pool. Gypsy Oil Co. has the cellar dug for No. 12 B. Carter, SE cor. NW NW, Section 11-9-5. Independent Oil & Gas Co. & Amerada Petroleum Corp.'s No. 2 J. Hill, NW cor. NE NE, Section 7-9-8, is a location. Producers & Refiners Corp. has the rig on the ground for No. 3 Dungan,

(Continued on Page 83)

UNION COUNTY, ARK., TESTS FEATURE LOUISIANA-ARKANSAS WILDCAT WORK

By Nell Williams

SHREVEPORT, La., Oct. 3.—Wildcat operations in the north Louisiana division the past week were featured by two wells, Ohio Oil Co.'s No. 2 Crain, and Magnolia Petroleum Co.'s No. 1 Carroll, both in Section 1-17-14, northeastern Union County, Arkansas, and by a record gasser, Simms Oil Co.'s No. 1 Dodson, Section 15-23-12, in the Carterville Field of northern Bossier Parish, Louisiana.

Magnolia Petroleum Co.'s No. 1 Carroll is producing an estimated 30,000,000 feet of gas with a spray of clean 31.3 gravity oil, and Ohio Oil Co.'s No. 2 Crain is making 7,500 bbls. of fluid of which about 375 bbls. is 26.8 gravity oil. Simms Oil Co.'s No. 1 Dodson is the largest gas well yet completed in the Carterville Field, gauging 42,834,560 feet of gas.

Foster and associates' No. 1 Nabors, Section 30-10-12, Pleasant Hill Field of northern Sabine Parish, Louisiana, has been completed estimated at 3,000,000 feet of gas from a formation at 3,275 feet, at which it blew out several weeks ago. Since then it has been deepened to a total depth of 3,475 feet. It is the second gas well completed in the field. The Rayville district of Richland Parish also added another gasser in Moody & Seagraves' No. 1 Hemler, Section 20-16-6e, which is making 14,000,000 feet of gas from a sand at 2,407-18 feet.

Status of Other Tests

In Winn Parish, Ohio Oil Co.'s salt dome test, No. 1 Rolan, Section 9-12-1w, tested salt water both at 2,115 feet and at 2,149 feet, and has been shut down. Ohio Oil Co. also tested dry in a Natchitoches Parish wildcat, its No. 2 L. & A., Section 26-13-6. The test was made with a sand tester at 3,140-41 feet. This test will be deepened.

Rice and associates' No. 1 Newton, Section 13-17-16, west of the Lisbon Pool of Union County, Arkansas, had been bailed down 1,000 feet as the week closed but had found no showing. The test has a sand at 2,920-24 feet and has 6-inch casing cemented at 2,919 feet.

Five other scattering wildcat tests were abandoned during the week, two being in Hempstead County, Arkansas; one in Columbia County, Arkansas; one in Union County, Arkansas, and one in La-Salle Parish, Louisiana.

Other wildcat operations of the week were:

Bossier Parish

In the Carterville district of the northern part of the parish, Bahan & Davis have a rig up for No. 1 Dodson, Section 15-23-12. This is to the north of their No. 2 Mays, Section 22, which was completed during the week making 20,000,000 feet of gas and a spray of salt water from a total depth of 3,111 feet. Bethany Oil & Gas Co. is at 3,062 feet in No. 2 Dodson, Section 16. Magnolia Petroleum Co. is setting 8⅛-inch casing at 3,082 feet in No. 1 Dodson, Section 16. This company also has started operations in No. 1 (Zulu) Roberson, Section 23. Setting 13⅜-inch casing at 467 feet. Northwest Louisiana Gas Co. is drilling at 1,100 feet in No. 1 Mays, Section 22. Simms Oil Co.'s No. 2 Dodson, Section 15, has been completed at 3,061 feet making an estimated 20,000,000 feet of gas. The Texas Company is down 1,177 feet in No. 1 Wilkerson, Section 36, and has cemented 8-inch casing. Atlantic Oil

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May Open New Pool in Union County

Wildcats Attract Attention by Good Showing. Pine Island Test May Have Discovered New Deep Horizon There

By Neil Williams
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Oct. 3.—Two wildcat wells in northeastern Union County, Arkansas, held the interest of operators in the north Louisiana-Arkansas division the past week although the completion of another Trinity well in the Pine Island Field bearing indications of tapping a new deep producing horizon was an important late development. Production continued to decline, reflecting a drop in the daily average of 1,695 bb's.

The two wildcat wells, both in Section 1-17-14, strengthened possibilities for the development of a new pool in that district about 6 or 7 miles northeast of the East El Dorado Field which was opened the latter part of June when the Ohio Oil Co. completed a well (No. 1 Crain) pumping 50 bbls. of clean 35.3 gravity oil daily.

One of the two wells blew in early in the week after the plug had been drilled out and preparations were being made for testing. This well, Ohio Oil Co.'s No. 2 Crain, a half mile southwest of the discovery well, caused considerable sensation when it flowed 30 bbls. of cut oil in the first 30 minutes together with an estimated 4,000,000 feet of gas daily. At the end of the first half hour, however, salt water broke in and in three hours the well was making an estimated 2,000 bbls. of fluid, of which approximately 90 per cent was salt water. The fluid continued to increase and Saturday the well was flowing at the rate of 7,500 bbls., 5 per cent cut oil, into an earthen pit through a 4-inch flow line from a side connection.

Attempts so far to close the well in have forced the fluid out from around the 6⅝-inch casing, indicating a leaky casing seat. Saturday the drillers were pouring cement in between the 6-inch and the 10-inch casing, the latter having been cemented at a depth of 247 feet, and were making arrangements to lubricate to kill the well to recement the 6⅝-inch casing or set a new string.

Source of Water Unknown

There is some uncertainty regarding the source of the salt water as the steady increase in the flow might indicate that the well is making bottom hole water along with water through the leaking casing seat. However, it is planned to cement the bottom of the hole as well as the casing to shut all water off.

The oil production is from a sandy formation at 3,015-20 feet; the 6⅝-inch casing being cemented at 3,007 feet. The oil tests 26.8 gravity but even after the water has settled out in the pit shows 8 per cent b.s. and 20 per cent water. The oil is substantially lower in gravity than in the discovery well although production is from approximately the same level, and in addition the oil from the discovery well so far has developed but very little water and b.s. and still is pumping around 45 bbls.

The second wildcat completed in the same section during the week was Magnolia Petroleum Co.'s No. 1 Carroll, whose production is estimated at 30,000,000 feet of gas daily with a spray of oil which gauged 129 bbls. in the first 19 hours flowing through a 4-inch line with a quarter-inch choke.

The latter wildcat is a northeast offset to Ohio Oil Co.'s discovery well and nearly a mile northeast of the latest Ohio well, the No. 2 Crain. The Magnolia well is in the extreme northeast corner of the section and the Ohio's No. 2 Crain in the southwest corner. Unlike that in the No. 2 Crain, the oil from the Magnolia well is clean and tests 31.3 gravity, thus indicating three different gravity crudes in the same district. The Magnolia production is considerably higher, being from a sand and shale at 2,985-92 feet with casing cemented at 2,975 feet.

Due to the depths of the production and to the fact that virtually all the acreage for some distance around the wells is held principally by three large companies, the Magnolia Petroleum Co., Ohio Oil Co. and Pure Oil Co., it is unlikely there will be any extensive drilling activity in that district for the time being. The district is defined by two dry holes, one to the northeast and the other to the northwest, both of which were abandoned several weeks ago.

Pine Island Field

Developments in the Pine Island Field were marked the latter part of the week with the completion of Arkansas Fuel Oil Co.'s No. 1 Huckaby, Section 14-21-15, with an initial flow of 120 bbls. daily of pipe line oil, together with around 4,000,000 feet of gas. Production is from a formation at 3,868-71 feet and as the bottom is 190 feet lower than in other wells in the Pine Island deep Trinity horizon, it is possible that this well is flowing from a new lower formation. The well is one of the few in the field making pipe line oil. The No. 1 Huckaby originally was tested at 3,676 feet showing only salt water but was deepened to its present level and 5 3-16-inch casing set with a packer.

Only five other oil producers were completed in the division during the week, two of which were pumpers in the Smackover Field, one in the Urania Field and two in Caddo Parish. One Caddo Parish well was Magnolia Petroleum Co.'s No. 26 Raines, Section 22-21-15, Pine Island Field, the first well in that district to produce heavy oil at a corresponding horizon. The production is from a total depth of 2,845 feet. This is approximately 1,000 feet shallower than the Trinity horizon wells in the field.

In the Carterville Field of northern Bossier Parish, Simms Oil Co. brought in two gas wells, one, the No. 1 Dodson, Section 15-23-12, producing 42,834,560 feet of gas daily, the biggest well yet completed in the field. This is the third well in the field to come in without a trace of salt water. Depth of the well is 3,086 feet. No. 2 Dodson was brought in several days before good for 19,000,000 feet of gas. Five other gas wells were completed in the division.

In the Cotton Valley Field of Webster Parish, Crusader Oil & Producing Co.'s No. 18 Hope, Section 24-21-10, is standing 1,000 feet in oil after sanding up 18 feet from the bottom. The liner has been pulled, and, after the hole is cleaned out, will be reset. Total depth of the hole is 2,510 feet.

Storm Does Damage

Several oil fields of this division were hard hit by strong wind Friday afternoon which leveled around 40 derricks and did other smaller damage. The most damage was done in the Pine Island district of Caddo Parish but most of the derricks destroyed were on old wells.

Daily average production totaled 152,785 bbls. during the week, a decline of 1,695 bbls. from the previous week. This was just a continuation of the steady drop in production which has been going on in this division for several months. Daily average production by fields was:

North Louisiana	
Caddo light	13,480
Caddo heavy	4,820
Homer	4,700
Haynesville	7,050
DeSoto-Red River	4,060
Elm Grove	705
Bellevue	1,050
Cotton Valley	5,350
Urania	9,890
Pleasant Hill	1,125
Total	52,230
Arkansas	
El Dorado	5,440
Lisbon	3,050
Smackover light	9,855
Smackover heavy	78,360
Stephens	1,200
Nevada	2,550
Bradley	100
Total	100,555
Total both states	152,785
Total last week	154,480
Decrease	1,695

A summary of operations for the week showed 18 completions, 14 wells waiting on standard pumping rigs, 13 temporarily abandoned, 170 drilling, 12 rigs, 29 derricks and 18 locations.

NORTH LOUISIANA

Bossier Parish

Humble Oil & Refining Co.'s No. 30 Bliss & Wetherbee, Section 15-19-11, deep Bellevue test, is drilling hard sand rock at 4,165 feet. A shallow test in the Bellevue district, W. L. Crook's No. 6 Larkin, Section 14, was abandoned during the week after encountering salt water at 420 feet. This was the second No. 6, the first having been abandoned the previous week. In the Elm Grove district, J. S. McCullough, trustee, has cemented 6-inch casing at 1,540 feet in No. 3 Hodges, Section 25-16-12.

Caddo Parish

The Pine Island district of Caddo Parish continues the most active spot in the entire division with nearly 35 deep tests drilling for the Trinity production. Arkansas Fuel Oil Co. has cemented 6⅝-inch casing at 3,530 feet in No. 2 Bashara, Section 23-21-15. This company's No. 1 Huckaby, Section 14, is down 3,872 feet, where a test will be made. A string of 5⅜-inch casing is being set with a packer preparatory for a test. Arkansas Natural Gas Co.'s No. 2 Lane, Section 13, is milling on junk at 3,641 feet. Dixie Oil Co. is drilling in lime at 3,090 feet in No. 9 Caddo M. L. Co., Section 23. This company's No. 89 Dillon, Section 14, is down 3,677 feet where 8-inch casing is being set. No. 90 Dillon, same section, is drilling lime at 3,344 feet. No. B-6 Files & Mabry, this section, has 8-inch casing set at 3,589 feet. Dixie Oil Co.'s No. A-2 Noel, Section 13, is drilling lime at 3,902 feet. No. 10 Slattery, Section 27, is in lime at 4,092 feet. Double I Oil Co. has a derrick up for No. 7 Watkins & Lane, Section 27. Golden Rod Oil Co. is coring ahead at 3,820 feet in its No. A-1 Hampton, Section 15. It tested salt water at 3,745 feet. Gulf Refining Co. has completed No. 10 Herndon, Section 15, flowing 25 bbls. of oil and 300 bbls. of salt water from a depth of 3,709 feet. Haynes Brothers' No. 2 Spell, Section 15, is drilling at 2,699 feet. Magnolia Petroleum Co. has cemented 13⅜-inch casing at 200 feet in No. A-8 Hampton, Section 15. This company's No. 26 Raines, Section 22, has been completed at the 2,845-foot level flowing 100 bbls. No. 23 Robertshaw, Section 23, is drilling lime at 3,607 feet. Pittsburgh Oil & Development Co.'s No. 1 Herndon, Section 15, is drilling lime at 3,889 feet. Shawmut Petroleum Co. has abandoned the location it had staked for No. 5 Jolly, Section 22. The Texas Company has cemented 8-inch casing at 3,563 feet in No. 49 Caddo Mineral Land Co., Section 23. No. 50 on the same lease is drilling lime at 3,480 feet and No. 51 at 3,010 feet. This company's No. 9 Herndon, Section 14, is in lime at 3,340 feet. No. 9 on the Herold lease in this section is being reamed to the bottom at 3,573 feet for a second test. This test showed an estimated 4,000,000 feet of gas at 3,569 feet. No. 10 Herold is drilling lime at 3,256 feet. No. B-14 Noel, also this section, is drilling lime at 2,320 feet. The Texas Company's No. 10 Mabry, Section 15, is drilling plug at 3,643 feet. No. 19 Raines, also in Section 15, is at the producing level with 8¼-inch casing cemented at 3,758 feet.

Waskom and Greenwood

In the Waskom and Greenwood districts, Belchic & Laskey are drilling at 650 feet in No. 2 P. Sharp, Section 10-18-16. J. O. A. Carper has a rig up for No. 1 Hammock, Section 27-18-16. Greenwood Producing Co. is drilling rock at 2,040 feet in No. 1 McCutcheon, Section 15-17-16. The same company has a derrick up for No. 3 Angurs, Section 6-16-16. Magnolia Petroleum Co.'s No. 1 J. W. Furrh, Section 28-18-16, is blowing gas and 'ots of salt water with the hole down 1,695 feet.

Falcon Drilling Co.'s No. 1 Schmidt, Section 27-20-15, is being bailed for a test of a broken sand encountered at 2,281-92 feet. D. S. Richardson estate's No. 5 Youree-Randolph, Section 13-20-15, has 1,500 feet of oil in the hole from sand at 2,262-66 feet and is to be put on the pump. Standard Oil Co. has a derrick up for No. 15 Hart, Section 34-21-16. This company's No. 189 Stiles, Section 27-21-16, is in a sand at a total depth of 1,836 feet and is to be pumped. Tubbs and associates are drilling in gummy shale at 760 feet in No. 1 Hines, Section 9-14-16. Woodley Petroleum Co.'s No. B-3 Knight, Section 11-15-12, is down 2,459 feet where 6-inch casing is being set.

LaSalle Parish

The Urania Field of LaSalle Parish got another producer in B. Hunt's No. 5 Urania, Section 7-10-2e, which has been completed flowing 40 bbls. daily from a broken sand at 1,515-19 feet. In the same section, another test, Zoder and associates' No. 5 Urania, is being bailed for a test of the sand at 1,516-21 feet. Natural Gas & Fuel Corp. has a rig up for No. M-12 Urania, Section 20. Shreveport Oil Corp. has set 10-inch casing at 103 feet in No. 1 Morrow, Section 26-10-1e. Montague Oil Co. is starting a new test in No. 6 Zenoria, Section 11-9-1e, and is down 105 feet where 10-inch surface casing has been set. Wingfield and associates' No. 2 Gibson, Section 2-9-1e, has been shut down at 3,073 feet. This is the deepest test ever drilled in the Urania district.

Monroe District

W. C. Feazel's No. 1 Faulk, Section 15-20-4e, Morehouse Parish, has been completed making 31,000,000 feet of gas with a rock pressure of 845 pounds. This is producing from a total depth of 2,143 feet. Natural Gas Producing Co. has cemented 8-inch casing at 918 feet in No. 9 Tensas Delta, Section 27-22-4e. This company also has a derrick up for its tenth test on this lease. The Texas Company's No. 1 Silvey, Section 22-20-6e, tested salt water with a sand tester at 3,005 feet and has been shut down.

In Ouachita Parish, C. W. Frierson's No. 1 Feazel, Section 17-19-4e, is down 2,135 feet where 6-inch casing has been cemented. J. S. Gould's No. 1 Grayling, Section 11-15-2e, cored cap rock from 2,722 to 2,730 feet. Hatcher & Evans has a rig up for No. 6 Hatcher, Section 16-19-4e. Industrial Gas Co. is drilling at 1,700 feet in No. 2 Sullivan, Section 5-18-4e. Ladell Properties, Inc., has cemented 6-inch casing at 2,125 feet in No. 44 fee, Section 6-19-5e.

In Union Parish, Interstate Natural Gas Co. has a location for another test, No. 1 Stephenson, Section 6-21-4e. Southern Carbon Co. has set 8-inch cas-

(Continued on Page 84)

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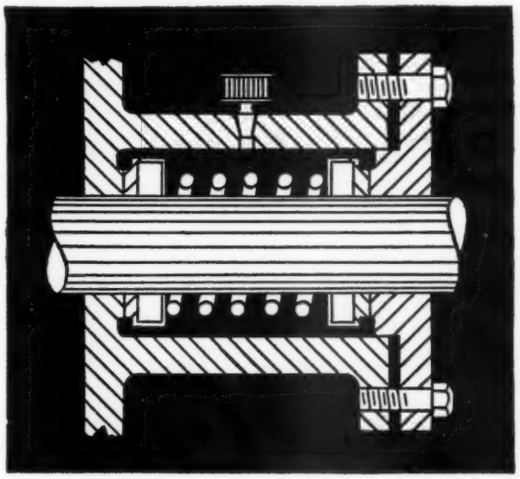

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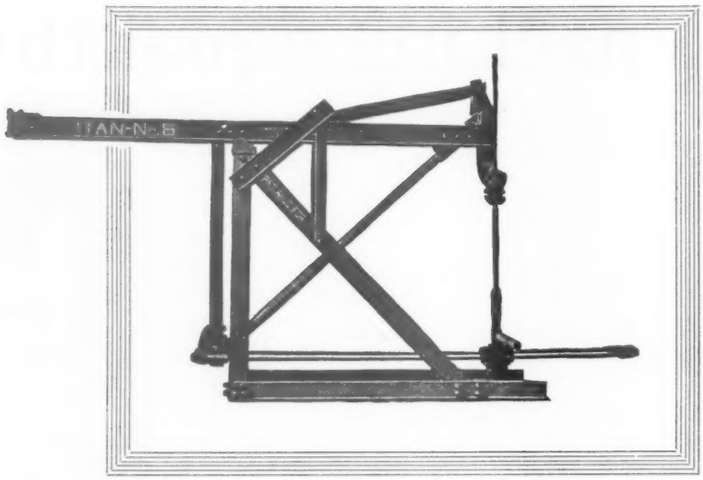

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Hull Field Well Makes 4,000 Barrels

Few Completions in Coastal Pools, Although New Work Records a Gain. Lockport Gets a 1,200-Bbl. Producer

By Staff Correspondent

HOUSTON, Tex., Oct. 3.—One typical Gulf Coast well nearing the gusher class was the best of the few completions in the Coastal region during the past week and was one of the few interesting developments. However, new production totaled around 8,000 bbls. for the seven-day period and several deep wells were abandoned as failures. Production declined sharply and was off 5,500 bbls. Field work showed an increase when drilling reports were compiled. Flush production for the month of September was down a few hundred barrels in comparison to the previous month's summary.

The big well of the week was completed by the Republic Production Co. in the Hull Field of Liberty County. At 2,550 feet, the well came in making around 2,000 bbls. of oil. Its output steadily increased until it reached the class of the big wells in the Gulf Coast region. Its best 24-hour gauge was 4,000 bbls. of pipe line oil and according to last advices from the field the well was holding up well. A 150-bbl. pumper was also completed in the same area last week. In the South Liberty Pool another small pumper was completed.

Next in line to the big Hull Pool well was Gulf Production Co.'s No. 35 T. W. Davis in the Big Creek Pool in Fort Bend County. It had an initial flow of 2,200 bbls. of 27.2 gravity crude from a total depth of 4,085 feet. The Texas Company's No. 2 Wheat in Big Creek which made 1,600 bbls. initially from 3,025-34 feet, stopped flowing and is being put on the beam. A 95-bbl. pumper wound up the completion report in Fort Bend County. Drilling in that county is fairly active.

Good Well at Lockport

A 1,200-bbl. producer was completed by the Vacuum Oil Co. and Gulf Refining Co. in the Lockport Field at 4,375 feet which was the only completion in Calcasieu Parish. The Pure Oil Co. is still having difficulty in completing No. 5 Sweet Lake in the Sweet Lake Pool, Cameron Parish. The well is showing oil and gas at 5,141 feet and is now being bailed. In the Edgerly Field, Hercules Oil Co.'s No. 1 Paraffine was worked over and completed as a 100-bbl. pumper. In the Welsh Field of Jefferson Davis Parish, John Carradine and associates' No. 1 Walsh has not been "officially" completed. The well looks good for 25 bbls. daily on the pump from a total depth of 1,355 feet and is standing with a hole full of oil. Border's No. 1 Mallard Bay, in Cameron Parish, was abandoned as a failure in sand at 3,518 feet. Two tests in Iberia Parish are drilling at interesting depths and a deep test in St. Mary Parish is shut down at 4,900 feet waiting for a geophysical report.

One small pumper was completed in Brazoria County. A 5,400-foot test in Goose Creek in Harris County and two other wells in the same pool are drilling at deep depths. No new wells were completed in Pierce Junction but two are being bailed. Spindletop's only completion was a deep dry hole. In the rank wildcat areas several tests are down at interesting depths and are drilling ahead.

The east and west Galveston Bay area in Galveston County was pretty well "shot" during the past week by shooting crews. Crews are fairly active in other areas and some work is going on in Austin County. Louisiana continues the most active area for geophysical crews with new areas being worked in St. Landry Parish near Kritz Springs and along the 7-mile canal near Bunkie.

More Field Work

Field work in the Gulf Coast region showed an increase of 32 operations in comparison to the last month's report when figures of field operations were compiled at the end of the month.

Production of the Gulf Coast region was off 5,500 bbls. in daily average last week due to the decline of several pools and Spindletop in particular. Despite the three new completions in Cedar Creek that new area in East Central Texas showed only a 50-bbl. increase during the past week and the district as a whole declined 166 bbls. in daily average. Southwest Texas also declined.

The estimated daily average production of the Gulf Coast, East Central Texas and Southwest Texas is as follows:

Gulf Coast

Spindletop	54,163
Saratoga	1,080
Batson	1,388
Goose Creek	7,790
Sour Lake	4,106
Hull	15,813
Big Creek	2,815
Columbia	10,[illegible]3
Humble	3,850
Pierce Junction	7,620
Blue Ridge	3,575
Markham	250
Orange	4,5 7
Damon Mound	900
South Dayton	245
South Liberty	2,285
High Island	54
Moores Field	72
Boling	2,419
Nash Dome	1,135
Barbers Hill	800
Vinton	4,652
Starks	696
Edgerly	2,180
Evangeline	1,329
Lockport	5,400
Lareauville	17
Sweet Lake	0
Sulphur	35
Total this week	139,670
Total last week	145,576
Loss	5,906

East Central Texas

Mexia	9,512
Cedar Creek	475
Nigger Creek	1,955
Currie	618
Wortham	2,701
Richland	745
Powell	14,591
Total this week	30,617
Total last week	30,783
Loss	166

Southwest Texas

Somerset	2,387
Lytton Springs	1,772
Dale	826
Luling	15,816
Miscellaneous	9,491
Total this week	30,292
Total last week	30,869
Loss	577

Austin County

Humble Oil & Refining Co.'s No. 1 Gotoskey had a showing of oil in sand at 1,108-14 feet and is drilling ahead in water sand at 1,121 feet. Same company's No. 1 Remmert is drilling at 810 feet. Humble company's No. 1 Walton near Bellville is a location. Two miles west of Peters, T. F. Woods' No. 1 Trenckmann is drilling in shale and gravel at 320 feet.

Brazoria County

Starks and associates' No. 3 H. C. Hinckle is drilling at 2,200 feet. Roxana Petroleum Corp.'s No. 1 State Allen made 30 bbls. the first 24 hours from sand at 5,141-53 feet and 50 bbls. the second 24-hour period. Same company's No. 1 Randon is a rig; No. 2 Bell is drilling gumbo at 2,920 feet, and No. 1 Schepler is drilling at 2,510 feet. Rycade Oil Corp.'s No. 12 Nash is showing oil in sandy shale at 5,803 feet. Gulf Production Co.'s No. 3 Perry is a rig. Surface casing is being set at Texas Gulf Sulphur Co.'s No. 2 Davidson; a derrick is up for No. 3 Davidson. Same company's No. 1 Dull is drilling at 1,414 feet.

Chambers County

In the High Island Pool, Sun Oil Co. is rigging up to deepen No. 10 and No. 6 Cade. At Barbers Hill, R. L. Bartlett's No. 1 Fisher is a derrick. S. T. Hindman and associates' No. 1 Fisher is drilling gumbo at 2,026 feet. Humphreys Corp.'s No. 5-B Kirby is in shale at 4,194 feet.

Colorado County

One mile north of Altair, R. E. Waldrop's No. 1 Tait is bottomed in gumbo at 1,465 feet. One joint of 4½-inch screen was set on bottom of liner.

Fayette County

Magnolia Petroleum Co.'s No. 1 Ida Fortran, near LaGrange, is drilling at 3,146 feet.

Fort Bend County

In the Blue Ridge area, Navarro Oil Co.'s No. 3 Robinson-B is drilling at 3,225 feet. Gulf Production Co.'s No. 15 Bassett Blakely-C is flowing 95 bbls. of 39.0 gravity oil from 3,144 feet; No. 16 on the same lease is drilling at 1,012 feet, and No. 12 West Schenck is being rigged. Cunningham Production Co.'s No. 2 Blakely is drilling at 410 feet. Gordon, Fowler and Dickson's No. 1 Blakely is being rigged.

The Texas Company's No. 2 Wheat, in Big Creek, which came in flowing 1,600 bbls. from sand at 3,025-34 feet, stopped flowing and is being put on the pump. Gulf Production Co.'s No. 35 T. W. Davis, in the same field, started off making 2,200 bbls. daily from 4,000 feet. No. 43 T. W. Davis is drilling at 1,150 feet. In the Orchard area, the Gulf company's No. 13 Moore, an old gas well drilled deeper, is drilling at 3,900 feet. Gulf company's No. 1-A Beard, in Long Point, is drilling at 3,275 feet. Same company's No. 4 Trone is in cap rock at 1,182 feet and lost returns. The well may be abandoned. Gulf company's No. 4 Wolf is drilling at 1,000 feet.

In Nash Dome, the Rycade Oil Co.'s No. 16 Wisdom had sandy lime at 4,232 feet; No. 17 is drilling at 2,612 feet. Six-inch was cemented at 3,896 feet at Rycade company's No. 5 Fritz Meier, and No. 4 is drilling at 4,200 feet. In Boling, the Sun Oil Co.'s No. 3 Farmer is being sidetracked for the second time after twisting off a bit at 2,460 feet. The hole is being sidetracked at 2,365 feet. Sun Oil Co.'s No. 2 H. R. Farmer is drilling at 1,115 feet and No. 1 Kasparek is drilling at 1,252 feet.

Grimes County

J. Pundt and associates' No. 2 Cuthrell is drilling at 300 feet. Morico Oil Co.'s No. 1 Dodd, near Iola, is a location.

Hardin County

In the Batson area, The Texas Company's No. 1 R. S. Sterling is drilling at 3,510 feet. The strainer was set and Ada Belle Oil Co.'s No. 116 Honeymoon is being bailed at 1,162 feet. Paraffine Oil Co.'s No. 70 Paraffine is drilling at 169 feet. Orange Petroleum Co.'s No. 4 Merchant, in Sour Lake, is drilling at 1,176 feet.

Harris County

Gulf Production Co.'s No. 14 Chapman-Bryan, in Goose Creek, will be abandoned at 5,410 feet. Gulf company's No. 8 Hoffman-Gaillard is drilling at 2,625 feet; No. 11 Stateland Producers is drilling at 2,250 feet, and No. 26 Ashbel-Smith is drilling at 4,960 feet. Port City Oil Co.'s No. 1 Grace Adey is shut down at 1,590 feet. Southern Exploration Co.'s No. 7 Freeman is shut down at 3,000 feet. Humble Oil & Refining Co.'s No. 72 Simms-Smith is drilling at 4,550 feet, and No. 4 Ashbel-Smith is drilling at 1,825 feet. Standard Production Co.'s No. 6 Scorregen is to be deepened.

No new wells were completed in Pierce Junction during the past week. Rio Bravo Oil Co.'s No. 2 Settegast-B is being bailed at 3,550 feet; No. 6 is drilling at 1,775 feet, and No. 6-A is being washed at 3,600 feet. Smith and associates' No. 1 Humble fee is drilling at 1,200 feet. Navarro Oil Co.'s No. 3 Cain is drilling at 3,451 feet. Associated Oil Co.'s No. 1 Boyle is being rigged. Gulf Production Co.'s No. 21 E. R. Taylor is drilling at 2,450 feet, and No. 1 H. M. Perry is drilling at 1,450 feet. Moody Oil Corp.'s No. 2 Hume is drilling at 1,500 feet. H. R. Allen and associates' No. 3 Howe is drilling at 4,715 feet. At Hockley, Marland Oil Co. and Humble company's No. 1 Warren is in anhydrite at 4,150 feet. Gulf company's No. 1 Burt Griffith is drilling at 4,565 feet, and Gulf company's No. 21 Taylor is drilling at 2,200 feet.

Jefferson County

A dry hole was Spindletop's contribution to the completion report. Magnolia Petroleum Co.'s No. 5 fee was abandoned at 4,430 feet. Same company's No. 6 fee is drilling at 5,400 feet, and No. 2 fee-A is drilling in salt water sand at 5,100 feet, and No. 7 fee is a derrick. The hole is being cleaned out to 5,000 feet at Hines Brothers Oil Co.'s No. 1 Weed. Sun Oil Co.'s No. 12 McLean is drilling at 5,275 feet; No. 7 McLean is drilling at 4,525 feet; No. 11 McLean is a derrick; No. 6 McLean is drilling at 5,580 feet; No. 14 McLean is drilling at 5,760 feet, and No. 4 Price is drilling at 5,010 feet. Rio Bravo Oil Co.'s No. 58 T. & N. O. is being rigged to drill deeper. J. O. Davis and Kinnear's No. 1 Gladys is drilling at 5,350 feet. Gulf Production Co.'s No. 12 Oakwood Realty Co. is being put on the pump at 5,550 feet; No. 16 Marrs McLean-A is drilling at 1,900 feet; No. 226 Gladys is drilling at 760 feet; No. 11 Marrs McLean-A is drilling at 5,150 feet; No. 6 Oakwood Realty Co. is drilling at 3,325 feet, and No. 7 Jeanette Mann is drilling at 3,850 feet. Four miles northeast of Spindletop, Deep Test Oil Co.'s No. 1 McFaddin is fishing at 2,165 feet. At Fanette, Gulf Production Co.'s No. 4 Bordages is drilling sand and gravel at 400 feet. The drill stem stuck at 3,230 feet at Beaumont Oil & Prospecting Co.'s No. 1 Tyrell 3 miles northwest of Beaumont. Five miles northeast of Port Arthur, Jim McMurry's No. 1 Crosby is drilling shale at 2,450 feet.

Liberty County

In the South Liberty Pool, Navarro Oil Co.'s No. 10 Harrison is a 15-bbl. pumper at 3,400 feet. Republic Production Co.'s No. 45 Dolbear, in the Hull Pool, was the best completion of the week in the Gulf Coast region. It was completed as a 4,000-bbl. well from 2,550 feet. Same company's No. 99 Dolbear is drilling at 1,800 feet and No. 43 Dolbear is being rigged to drill deeper. The Texas Company's No. 5 Hannah-Vacuum is drilling at 3,460 feet; No. 7 Hannah-Vacuum is a location, and No. 7 Merchant is drilling at 2,975 feet. Big Dome Interests' No. 3 Palmer is in salt at 1,560 feet.

Gulf Production completed one well in Hull and is drilling two others. No. 11 W. L. Thomas made 150 bbls. initially on the pump from 3,171 feet; No. 87 Phoenix Development Co. is drilling at 1,440 feet, and No. 29, on the same lease, is being rigged to drill deeper. Hull Oil Co.'s No. 7 Harrison is being rigged to deepen, and Empire Gas & Fuel Co.'s No. 27 Barngrover is drilling at 600 feet. At North Dayton, the Harrison Oil Co.'s No. 2 Quintette is drilling gumbo at 3,259 feet. The Texas Company is clearing a location for No. 1 Harvard at Davis Hill.

Matagorda County

Gulf Production Co.'s No. 3 Sanborn, at Hawkinsville, is drilling hard lime at 4,698 feet. At Markham, the Rycade Oil Corp. and Humble Oil & Refining Co.'s No. 2-B Kountze is bottomed at 4,033 feet and is being sidetracked at 2,600 feet. Near Bay City, the Matagorda

(Continued on Page 84)

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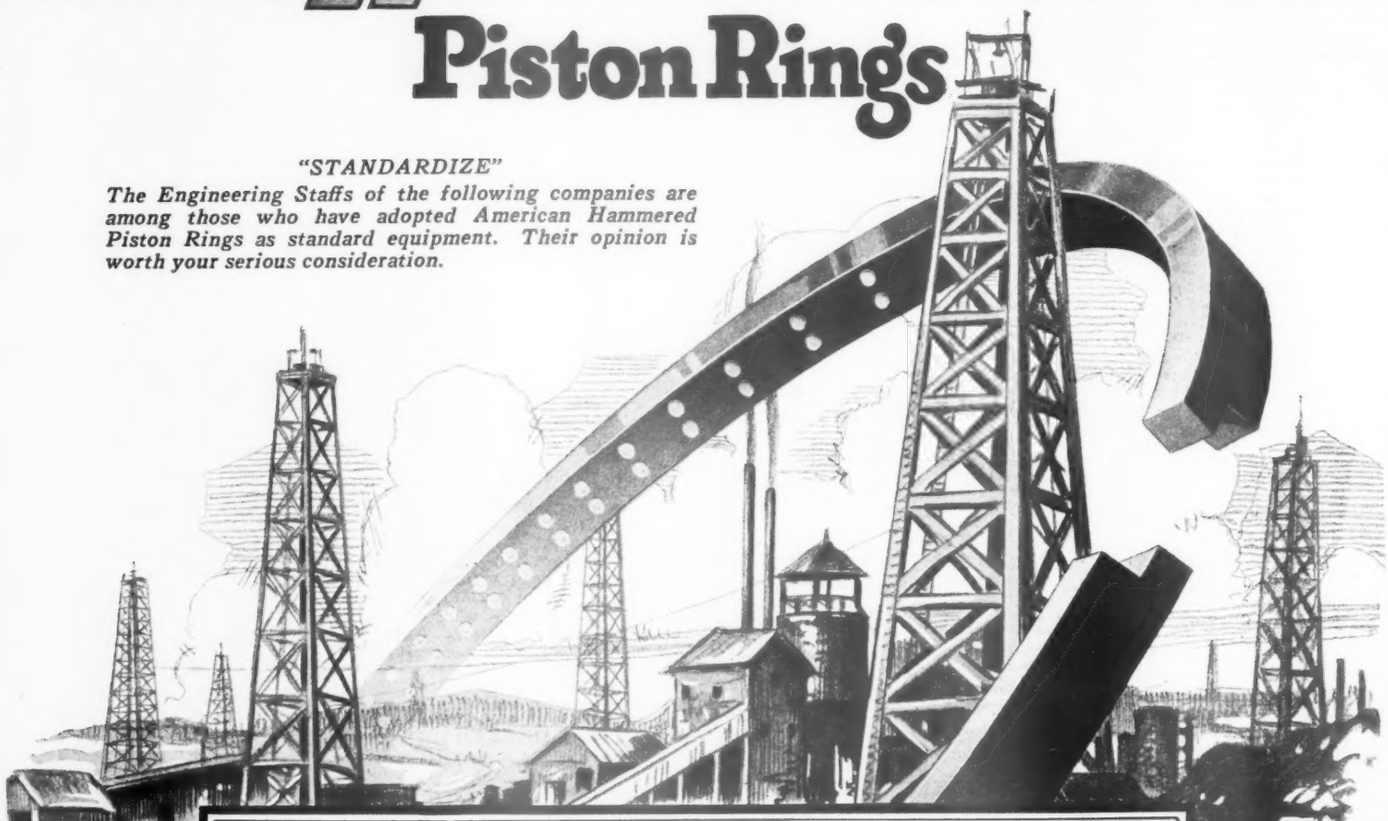

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Humble's Dale Field Test Small Well

Got Serpentine High and Was Expected to Make Good Producer. Test on Mexican Side at Laredo Is Bailing Oil

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Oct. 3.—Humble Oil & Refining Co.'s No. 1 Clingensmith in the Dale Field in eastern Caldwell County is a small well, 300 feet into the Serpentine. Following the completion of The Texas Company's No. 2 Beatty as a good well and The Texas Company and Humble's No. 2 Clingensmith an offset as a good well, the field was saved at a time when it looked disheartening. Humble's No. 1 Clingensmith, about two or three locations farther northeast, got the Serpentine high and it was expected it would make a big well and point to an extension of the field to the northeast but it seems to have failed to do it. It topped the Serpentine at 1,925 feet and was completed at 2,244 feet and is bailing a small amount of oil.

Humble's No. 2 Clingensmith topped the Serpentine at 1,916 feet which is now the highest in the field and is setting casing at 1,911 feet. It will be ready to test by the middle of this week. The Texas Company's No. 1-B Beatty southwest of the dissovery well which missed the pay at the regular depth has been drilled deeper and is in the Georgetown at 2,610 feet and will go to the Edwards lime. Magnolia's No. 1 Taylor, a half mile or so south of the discovery well, got no Serpentine and at 2,310 feet is in the Austin chalk.

One new location has been announced. Sun-Empire have made location for No. 3 Talley, 610 feet northeast of No. 2 Talley and 150 feet from the northwest line of the lease. Rig is moving in. It is 3,500 feet southeast of the discovery well and will make a little extension to the field if it is a producer. Now that the Humble's No. 1 Clingensmith acts like a small well geologists are a little confused as to what to expect of the field and what to do next.

Laredo District

In the Laredo district, the bailing of the well on the Mexico side of the Rio Grande was in progress late in the week. Casing has been set. The well at last reports had bailed down 1,600 feet and was showing some oil. It is 3,605 feet deep. Considerable is expected of it.

Only one 40-bbl. well was completed in the Laredo district last week and it was the No. 28 Merchants State Bank in the lower end of the Randado Pool by the Magnolia Petroleum Co. In the Carolina-Texas Pool in Webb County, Magnolia's No. 2 Webster at about 2,600 feet on a Halliburton tester had 300 feet of fluid in the drill stem and 50 feet of it was oil. It didn't look like much of a well and is drilling deeper.

September pipe line runs from the Mirando district show that the No. 1 Webster of the Magnolia in the Carolina-Texas Field which is producing from about 3,000 feet averaged 6 bbls. a day for the month and the Associated-Carson discovery well of that same field averaged 25 bbls. a day from 2,600 feet. These are the only two oil wells thus far in the Carolina-Texas Field and both are making high-gravity oil.

Cole Gas Field

Cole Petroleum Co.'s No. 17 Benavides in the Cole gas field made a little oil when completed at 1,797 feet in April 1926, along with some gas. Later it went to gas and lately is making some oil again. Houston Oil Co. bought the Cin-Tex wells including the discovery oil well and closed them down some months ago due to their taking too much gas. The field therefore has not been producing any oil for some weeks. Cole Petroleum Co. is preparing to go extra deep in its No. 36 Benavides, 3 miles west of the Cole gas field, where it seemed to open up a new gas area with some possibilities of oil several months ago. No. 36 was the discovery well there. It is now drilling at 4,834 feet and has received 5,600 feet of 3-inch drill stem for drilling deeper. Milham Corp. has abandoned at 5,228 feet its No. 2 Salinas in Starr County, the deepest hole in the Laredo district.

COMPLETIONS

Jim Hogg County

Magnolia Petroleum Co.'s No. 28 Merchants State Bank, Survey 415, Randado Field, at 1,249 feet, is a 40-bbl. well.

Starr County

Milham Corp.'s No. 2 Salinas, Porcion 111, near center, has been abandoned at 5,228 feet.

Zapata County

Duke and others' No. 3 Martinez, Charco Redondo shallow field, Block 22, abandoned around 5,620 feet.

Caldwell County

William F. Morgan's No. 1 Osteen, Dale Field, Swearingen Survey, is pumping 4 bbls. at 2,217 feet.

Texas and Humble's No. 3 Clingensmith, Squire Damon Survey, Dale Field, at 2,080 feet, is pumping 70 bbls.

Bexar County

A. R. Beal, trustee's No. 1-A Ackerman, Survey 133½, has been abandoned at 917 feet making salt water.

DeWitt County

McNeil & Matthews' No. 1 Kaiser, A. Dillard Survey, has been abandoned dry at 4,000 feet.

Medina County

Mid-Kansas Oil & Gas Co.'s No. 1 Nixon, Survey 13¾, Adams gas field, at 992-1,021 feet, gauged 10,000,000 feet of gas.

New Locations

Martin & Wright's No. 1 Mat. Blackwell, 1 mile east of Burdette Wells, has been spudded in.

Frank Gomillion and others have spudded in a test in Travis County.

Southern Gas Utilities, Inc.'s No. 1 C. J. Weimers, Survey 63, Adams gas field in Medina County, is preparing to move on.

Humble Oil & Refining Co.'s No. 3 Clingensmith, Dale Field, Squire Damon Survey, at 150 feet to northeast line of lease and 1,050 feet to southeast line of lease and survey, in Caldwell County, is location.

Gulf Production Co.'s No. 1 Witser, C. M. Cannon Survey, Dale Field, Caldwell County, is location in northeast central part of the lease.

Magnolia Petroleum Co.'s No. 1 Kellar, A. Worthington Survey No. 8, Medina County, is location 210 feet to north line and 150 feet to west line.

McNeil & Matthews' No. 1 Toland, A. Dillard Survey, DeWitt County, is location 150 feet to north line and 300 feet to east line.

Parkhill and others' No. 1 Redick, 1 mile north of the Jones producing well, is moving in machinery, Milam County.

Kent-Middleton's No. 1 Arnold, proven territory in Milam County, is location offsetting the No. 1 Lowenstein.

Cole Field—Duval

Houston Oil-Sun Oil Co.'s No. 1 S. Benavides, cor. Blocks 75-76-129-120, is moving on. O. W. Killam's No. 8 R. Benavides, Survey 11, Block 6, located 585 feet to northwest lines and 150 feet to southwest lines, has been spudded in; No. 2 Bruni, Survey 585, located 1,000 feet to west line and 150 feet to north line is drilling at 600 feet; No. 1 Bruni, Survey 9, located 500 feet to northwest lines and 150 feet to northeast lines, is being deepened from 2,316 feet, well cratered when killed, and effort is now being made to cement off 500 feet sand which is causing the trouble and then drill deeper. Trussell, Cezeaux & Putman's No. 1 Bruni, Survey 10, located 150 feet to northwest lines and 450 feet to northeast lines, is drilling at 1,810 feet.

Simms Field

Breen-Woodward and others' No. 1 Dinn, Survey 666, located 1,170 feet to NE cor. (locat on changed), is clearing location for the well.

Humble-Reiter-Foster Field

Humble-Reiter-Foster's No. 4 Kohler, Survey 400, located 660 feet to SW cor., is drilling at 2,747 feet.

Piedras Pintas Dome

Humble Oil & Refining Co.'s No. 7 Walsh, Survey 185, located 2,050 feet to east line and 1,750 feet to north line, is drilling in sticky shale at 2,442 feet.

Randado Field—Jim Hogg

Moody Corp.'s No. 12 Palacious, Survey 291, Block 41, located 1,050 feet to west line and 150 feet to north line, has been spudded in. Magnolia Petroleum Co.'s No. 28 Merchants State Bank, Survey 415, located 2,100 feet to west line and 1,350 feet to north line, is drilling at 570 feet.

Henne, Winch & Fariss

W. F. Morgan's No. 2 Hinnant Block 6, is location 150 feet to west line and 450 feet to north line.

Alworth Pool

Alworth-Stevens-Hild's No. 20 M. Garza, Survey 39, Block 7, located 35 feet to southeast lines and 300 feet to northeast lines, has spudded in. Smilock's No. 1 F. S. Martinez, Survey 38, Block 4, located 660 feet to SE cor., is drilling at 500 feet.

Schott Field—Webb

Magnolia Petroleum Co.'s No. 9 Garcia, Survey 58, located 937 feet to west line and 150 feet to north line, is drilling at 835 feet.

Albercas Field

Newton Drilling Co.'s No. 2 Bruni, Block 64, located 600 feet to west line and 1,470 feet to south line, is location.

Aviator or Bruni Tracts

Pittman & Moriarty (Radio lease) No. 8 Puig, Block 4, is location.

Carolina-Texas Field

T. P. Morgan's No. 2 de la Garza, Survey 335, Block 23, located 400 feet to north line and 350 feet to west line, is drilling at 2,750 feet. Magnolia Petroleum Co.'s No. 2 Webster, SW NE NW, Survey 684, located 150 feet to NW cor., at 2,609 feet tested through drill stem and oil rose 75 feet in 15 minutes; casing is being set.

Andrews Pool

R. M. Strum's No. 1 Lopez, Survey 309, located 1,000 feet to NW cor. and and 250 feet to north line, has completed rigging up.

Cole Field No. 2

Cole Petroleum Co.'s No. 36 Benavides, Survey 412, Block 14, located 159 feet to east line and 266 feet to north line, is standing at 4,800 feet; No. 49 Benavides, Survey 412, Block 2, located 160 feet to NE cor., has derrick up.

Mirando Valley—Zapata

O. W. Killam's No. 4 Hinnant, Survey 74, located 1,980 feet to south line and 1,981 feet to east line, at 1,480-83 feet tested salt water and will drill deeper.

Dale Field—Caldwell

Magnolia Petroleum Co.'s No. 1 Taylor, G. W. James Survey, 150 feet to NW

(Continued on Page 115)

DEEP DRILLING IN LAREDO AREA INTERESTING WILDCATTERS THERE

By B. D. Stevenson

SAN ANTONIO, Tex., Oct. 3.—Wildcat operators who finance wells by selling acreage are having a more difficult time right now in southwest Texas than for months. There are more wildcat wells in southwest Texas shut down now than probably at any time in two or three years, shutdowns in many instance being due to failure to dispose of a sufficient amount of the lease block. At the same time there are less major company operations in southwest Texas than for many months. There is an indication of some little revival in wildcatting in the Laredo district and especially in deep drilling. Operators there have made some money on the shallow oil, but for the most part it has not been a big paying proposition, but they are convinced that a lot of deep holes will add to an understanding of the subsurface geology sufficiently to aid in the bringing in of some deep production. All the production in the field is coming from 2,500 feet or less, with the exception of two wells in the Carolina-Texas Field, one 2,600 feet deep and the other 3,000 feet, and each making high gravity oil while the shallow stuff is mostly low gravity.

Houston Gulf Gas Co., Houston Oil Co., William F. Morgan, and Mission Drilling Co. are each developing gas in the coast country, and a few wildcatters have been attracted that way and expectation has been that many more would seek that territory. For some months a few major companies have been scouting the Corpus Christi area, 50 miles north and south from Corpus Christi and 50 miles inland, but thus far only a relatively few blocks have been leased.

Jackson County

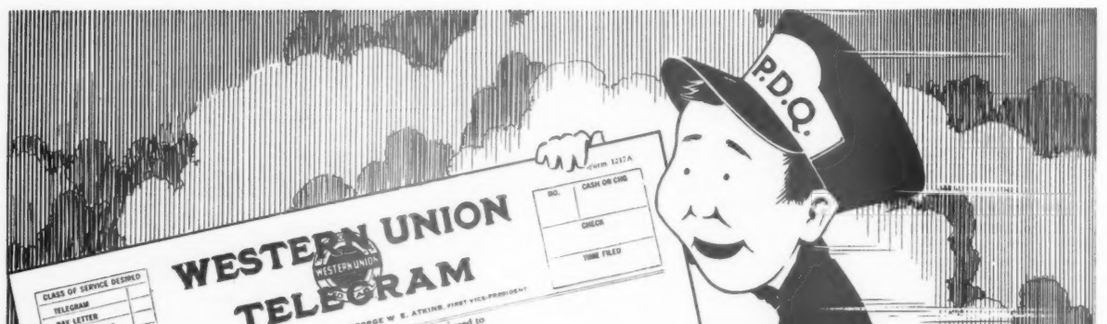
Jackson County has not been very encouraging. No. 1 White, drilled a few months ago, which came in a big gas well with rock pressure of 1,200 pounds in the Edna Field and big volume of gas, has gone entirely to water. The Edna Field was discovered several years ago, but the production seems to be mainly in shale, and while the field has pipe line connection, it is mainly yet wildcat territory. No. 6 Drushel, in the same field, was to have been tested last week on a drill stem tester, but failure to get a seat prevented and casing will be set.

Dale Field Failure

Failure of the Dale Field in Caldwell County to make much of a field thus far will cause operators to go a little slow when they find serpentine in a wildcat well. After the Lytton Springs Field came in and proved that it would be profitable, every wildcat well in southwest Texas that ran into any formation that looked green was sure it was serpentine. There is undoubtedly a lot of serpentine to be encountered along the Balcones fault, but the next time production is found in it there will be more of a disposition to develop the field one well at a time. There is still a chance for the Dale Field north and northeast and east, but the lesson from the field as it bears on future wildcatting in southwest Texas will surely be to "go slow."

One of the features of the Gulf Coast

(Continued on Page 116)



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New Sand Found in Moffat Dome Test

Northeastern Colorado May Get Good Play as Result. Oil Show Found in Utah Well Drilling on Big Block. New Mexico News

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Oct. 3.—The Sundance sand tests in northwestern Colorado afforded the principal news feature of the week for the Rocky Mountain area. The Texas Production Co.'s No. 10 Knowlton on the Moffat Dome topped a second sand in the Morrison at 4,291 feet which boosted the flow by 60 bbls. and 3,000,000 feet of gas. It is feeling its way towards the Sundance. The same company's No. 2 Parkinson on the Iles Dome also found a second sand in the Morrison at 3,312 feet which flowed 197 bbls. in the first 15 hours. The company's No. 5 Wick, on the Moffat Dome, pumped 140 bbls. the first 24 hours from the Mowry shale and is not yet in the Dakota. The Left Hand Oil Co. has a show for a well north of Boulder Field in the county of that name on the east flank of the main mountain range, but it is not yet certain whether it will be a commercial well. It found the Muddy at 1,940 feet, compared with 4,500 feet on the Wellington Dome 35 miles to the northeast.

Wyoming reported four completions, the best being a Lakota sand well for the Wyoming Associated Oil Co. on Section 24-40-79, which made 200 bbls. initial from a total depth of 2,477 feet. The others were small Wall Creek sand wells. Producers & Refiners Corp. has announced the location of its Oregon Basin test which will be on SW NE, Section 32-52-100, and another test is being started by the Buck Creek Oil Co. on the Ant Hill anticline in Niobrara County, where it recently made a discovery that swabbed 250 bbls. initially. The Continental Oil Co. is swabbing 60 bbls. from its No. 59 Whiteside, Section 9-33-76, in the Big Muddy.

Utah and New Mexico

Utah has its first interesting news for weeks in a show in the Midwest Exploration Co.'s No. 1 Hughes on the Elk Ridge anticline in San Juan County, supposed to be just above a 200-foot sand in the lower Pennsylvanian. This is a huge structure with 150,000 acres inside the closing contour.

New Mexico has little of interest outside of routine in drilling operations, but otherwise there were some new developments. The Maljamar Oil & Gas Corp. has sold its 160-acre lease with 16 producers in the Artesia Pool to the Flynn, Welch & Yates interests; a franchise for gas in Artesia has been approved by the city council, and several new tests are getting under way. No completions were reported for the week.

Colorado

Colorado had several developments of more than ordinary interest during the past week. One of these was the discovery of a second oil bearing sand in the Morrison formation on the Moffat Dome by the Texas Production Co. in its No. 10 Knowlton, Section 33-5-91. This test had water in the Dakota and was carried on down to test the Sundance, the new producing horizon on the Iles Dome, 5 miles to the southwest. It cut a sand in the Morrison at 4,226-65 feet which showed for 3,000,000 feet of gas and initial flow of 178 bbls. natural. A test was made of the production which dropped down to 90 bbls. It was then decided to drill deeper. The hole went into shale at 4,265 feet and at 4,291 feet topped another sand which increased the production by about 60 bbls. and which is making 3,000,000 feet of gas. The presence of this sand was not suspected and the drill was feeling for the Sundance, the objective horizon. A core taken shows that the sand has a good saturation. However, it is desired to get down to the Sundance and drilling is proceeding cautiously and slowly. This new development has further strengthened the belief that a big well will be found in the Sundance and that northwestern Colorado will have a big play the coming spring.

A second development of interest out of the ordinary during the week was a showing of oil in the Muddy sand, the first sand in the Dakota series, in the Left Hand Oil Co.'s No. 1 Prechtl, NW SW, Section 34-3n-70, in Boulder County, near Lyons, 35 miles south and west of the Wellington-Fort Collins producing field in Larimer County, and 12 miles north of the old Boulder Field. The location is on the east side of the mountain range and on a structure that parallels the mountains. It commenced drilling last February following a show of oil in a well drilled nearby by another interest which the Left Hand company subsequently took over. It has been held up for some time by a fishing job. At 1,840 feet, sand line measurement, it struck water which rose within 200 feet of the top. The tools were lost and since last May sidetracking has been in progress. Finally the casing was landed on bottom but a complete water shutoff was not secured. Drilling continued in a wet hole and at 1,940 feet, the top of the Muddy was encountered. At 1,945 feet, the tools were pulled and found to be coated with oil. There was considerable gas with the water and oil and operations were at once suspended to cement the hole so as to keep the upper water off the sand. The well will be drilled in within the next day or two. The Muddy sand at 1,940 feet at this location compares with 4,000 to 4,500 feet in the Wellington-Fort Collins district.

Important Shale Oil Test

None of the Sundance sand tests in Moffat County has yet reached the objective. Next in interest to that of the Texas Production Co.'s No. 10 Knowlton on the Moffat Dome, which found oil this week in a second sand in the Morrison, is the same company's No. 5 Wick, Section 10-4-91, on the same structure and 1,600 feet southeast of the Knowlton well. The Wick well was reported last week finding oil in the Mowry shale above the Dakota sand at 4,135 feet and standing 2,000 feet in the hole at 4,165 feet. The well is structurally lower than some of the wells that had water in the Dakota and was being deepened to the Sundance. It was decided to stop and make a pumping test of the shale oil and equipment for that purpose has been installed. The well pumped 140 bbls. in the first 24 hours. When it is recalled that shale oil found in the producing wells on this structure was never in sufficient quantities to justify a pumping test, being bailed down without much difficulty, it is apparent that some new conditions has been found that may prove an important development.

The Texas Production Co.'s No. 2 Parkinson, NW, Section 23-4-92, Iles Dome, which has been undergoing a production test from the Morrison sand, is being drilled on down to the Sundance and is in shale at 3,310 feet. It flowed 135 bbls. Wednesday from the Morrison sand which was topped at 3,284 feet. A late report just received from the well is that the shale proved to be only 2 feet thick and that at 3,312 feet it entered a second sand in the Morrison and from a total depth of 3,314 feet flowed 197 bbls. in the first 15 hours. The bottom is still some 100 feet or more off of the Sundance and the new discovery has caused everybody to expect a big well in the latter when it is reached. Same company's No. 1 Parkinson, SW, Section 23-4-92, is drilling in shale at 3,155 feet and getting close to the Morrison. Midwest Refining Co.'s No. 18-SD Parkinson, SW, Section 23-4-92, which had gas in the Morrison, is now below that horizon in black shale at 3,316 feet. The 6¼-inch casing was landed at 3,210 feet and is now trying to establish circulation. Same company's No. 4 SD Shaw, Section 27-4-92, is underreaming the 8¼-inch casing. Total depth is 2,965 feet. Another operation to the Sundance on the Iles structure is getting under way in the Moffat Petroleum Co.'s No. 1 Camp, NW NE, Section 13-4n-92, on the north flank. This well was drilled to 3,918 feet last year as a test to the Dakota, being on the flank of the structure, but near a fault. It topped the Dakota at 3,893 feet and found water. Operations were suspended. Recent discoveries in the Sundance resulted in the decision to go on down to that horizon.

Another Sundance Test

The other Sundance sand test at an interesting depth is the Texas Production Co.'s No. 2 Emerald, Section 31-2-102, Rangely Dome, Rio Blanco County. It topped a sand at 3,773 feet, supposed to be either a second sand in the Morrison, or the Sundance, and was drilled to 3,791 where it was still in sand. Operations were suspended at this depth awaiting orders after the barium was bailed out and the well allowed to blow to see if the gas would bring in the oil. A little oil is showing, but not in commercial quantities. The well probably will be allowed to blow for a while to clean itself.

The Platte Valley Petroleum Co.'s No. 1 Patterson, Section 24-6n-61, Greasewood Dome, Weld County, northeastern part of the state, reported last week 85 feet in an unidentified sand at 3,285 feet, showing some oil by the chloroform test, is still clouded in matters of reliable information. Best available report is that water and gas had increased in volume, but that the water did not go over the top. The water has a saline taste. Gas is bubbling up through the water and in sufficient quantities to burn for a few seconds when lighted. A stick of wood held over the top, it is stated, becomes sufficiently coated with gasoline to burn readily. It is reported that casing will be run in a few days to shut off the water and make a test.

The Parker Club's No. 1 Adams, Section 32-34-56, Las Animas County, southeastern part of the state near the New Mexico boundary at Branson, is drilling below 2,945 feet in a hard white lime topped at 2,800 feet and which has been continuous except for an 8-foot break of red slate. This is a Pennsylvanian test and results in the formations immediately below the lime will be awaited with considerable interest.

Wyoming

Wyoming reported for the week four completions in the Salt Creek Field and the locations for several important test wells. The best well in Salt Creek was the Wyoming Associated Oil Co.'s No. 6-L, SW, Section 24-40-79, completed in the Lakota sand at 2,477 feet with an initial production of 200 bbls. After testing, it was shut in. The other three were small wells in the first Wall Creek all of which were shot, but which have not been tested. These were Wyoming Associated's No. 26, SW, Section 14-40-79, completed at 1,318 feet; same company's No. 5, SW, Section 24-40-79, completed at 1,123 feet; and Midwest Oil Co.'s No. 15, SW, Section 35-40-79, completed at 1,215 feet.

The Producers & Refiners Corp. announced the location this week of its Oregon Basin test in Park County. Rig is being built in the SW NE, Section 32-52-100, the footage being 88 feet east and 2,365 feet south of the north quarter corner. It is on the consolidated Fred Frisby permit, which the company recently purchased and with which was consolidated two other permits. Rotary equipment with a 124-foot tower is being installed and it will start in a 20-inch hole. Electric power from the Oil Fields Power Co.'s new line will be used. This high tension power line from the Shosoni dam has been strung as far as the field and several companies are awaiting its completion to begin drilling. The Producers & Refiners' test is on the northwest side of the south dome and the block embraces 1,665 acres subleased from Charles Orchard and the Phoebus Oil Co., comprising three permits which have been consolidated for the test.

Oregon Basin is at present the center of interest in Wyoming due to the completion the past summer of the Ohio Oil Co.'s No. 3 Sonners, NW NE, Section 8-51-100, in the Embar-Tensleep with an estimated capacity of anywhere from 1,000 to 30,000 bbls. a day. The well was shut in and has been opened for a few minutes only as far as can be learned. The Illinois Pipe Line Co. has completed its 8-inch line from the field to the Cody loading racks, where two 80,000-bbl. steel tanks have been erected. A 55,000-bbl. steel tank in the field is now nearing completion and when it is finished, the running of oil will commence. Then it will become known definitely what the well will make.

Oregon Basin Active

Drilling in Oregon Basin is going ahead steadily, but none of the wells has yet reached important depths. The rotary is being used extensively. The Linco Petroleum Co. has three tests under way, its No. 1 Rousseau, SW NE, Section 33-51-100, being rigged up and ready to spud with cable tools; its No. 1 Pulley, Section 13-51-100, fishing for pipe at 1,006 feet; and its No. 1, NW SE, Section 24-51-100, being shut down at 1,015 feet to change to rotary. The S. C. Ferdig interests have three operations, these being No. 1, SE NE, Section 7-51-100, swedging collapsed casing at 1,400 feet, and at a total depth of 1,809 feet; No. 2, SE, Section 19-51-100, shut down at 1,485 feet waiting for cement to set in its 12½-inch casing; and No. 1 Gardner, NW SE, Section 28-51-100, which is ready to resume drilling at 200 feet. F. G. Ostlund's No. 1 Rousch, NW, Section 9-51-100, is shut down at 2,086 feet to install rotary. The Ohio Oil Co.'s No. 1 Batson, Section 6-51-100, is rigged up, but has not yet commenced spudding. Same company's No. 4, NW NE, Section 8-51-100, is shut down at 2,210 feet. The Continental Oil Co.'s No. 1 State, NW cor., Section 16-51-100, is ready to spud after skidding rig, the old hole being crooked. The Cody Petroleum Co.'s No. 1 Klindt, Section 7-51-101, set the 12½-inch at 710 feet. Total depth is 1,890 feet. Same company's No. 1, Section 28-51-101, is drilling at 745 feet. The Yodoc Petroleum Co.'s No. 1, Section 6-51-101, is shut down at 760 feet waiting for heavier tools, and the Yakima Oil Co.'s No. 1, Section 23-51-101, is drilling at 300 feet.

The Ant Hills anticline in Niobrara County, in which the Buck Creek Oil Co.'s No. 1 Delahoyde, NE NE, Section 25-37-63, swabbed 250 bbls. a day for two days from a total depth of 3,975 feet, until tankage was full, is to have some more tests under way shortly. The Delahoyde well has been deepened to 3,995 feet without any important change and is now held up by casing trouble.

The Buck Creek company has made a location for its No. 1 Hattie Peterson, NW, Section 30-37-62. Another location probably will be made shortly on Section 36-37-63. Same company has

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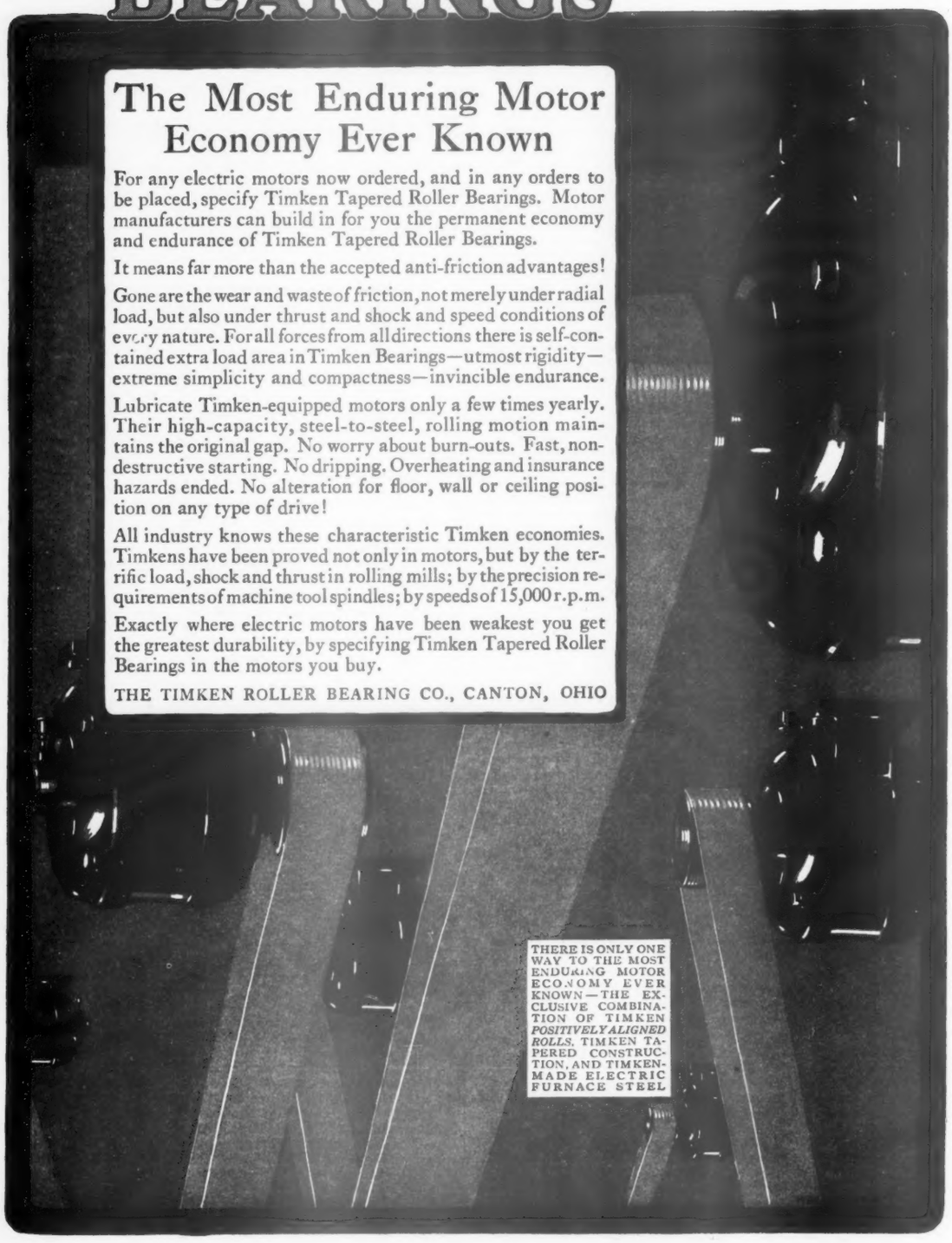
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made a location for its No. 1 Schuricht, SW NW, Section 5-35-65, in the Lance Creek Field, 15 miles to the southeast of the Ant Hills structure. This is in what is considered semiproven territory.

Big Muddy Field

In the Big Muddy Field in Converse County, the Continental Oil Co. is completing its No. 59 Whiteside, Section 9-33-76. It is bottomed at 3,156 feet and cleaning out and swabbing 60 bbls. a day. The Texas Production Co. has not yet decided whether it will go ahead with its deep test to the Lakota sand following the abandoning of its No. 33 Crary on Section 9-33-76. This well was abandoned at 3,099 feet due to bad hole, and it was planned to start another a few feet away.

The Producers & Refiners Corp.'s test on the Garland Dome in Big Horn County, which was announced last week as a new location, is building rig. Its exact location is in the NW NW, Section 24-56-98, 1,048 feet south and 378 feet east of the NW cor. The location is about a half mile west of its No. 2 Garland which was unable to get below 2,640 feet, and was plugged back and made into a gas well. This is a joint well with the Kinney-Coastal Oil Co. Utah Southern Oil Co.'s No. 3 Government, SE NW, Section 29-56-97, Garland Dome, three-fourths of a mile northwest of the Ohio Oil Co.'s big gas well, is drilling and reaming at 2,192 feet to set pipe at about 2,200 feet. The Sundance sand is expected at around 2,250. These are the only active operations on the structure, the other wells being shut down.

The Utah Southern company, which operates extensively in the Rocky Mountain area, is branching out into Texas where it is starting its No. 1 Grayson, in Reagan County, in the SW cor., Section 33, Block 8, University Land. Rig is now being moved to location. Operations will be conducted by contract under supervision of the Skelly Oil Co., which owns a 50 per cent interest with Utah Southern in well and leases on 8,360 acres.

In the southern area, the Producers & Refiners Corp.'s No. 3, Section 2-19-88, on the Hatfield Dome, in Carbon County, has some gas in the Dakota at 3,956 feet. A test is now being made, and if it does not show up as a good producer, it will be carried on down to the Sundance. In Sweetwater County, and on the structures on the boundary between that county and Colorado, the operators are getting ready for winter operations. This work consists principally of burying water lines and protecting fuel supplies. The Prairie Oil & Gas Co.'s No. 1 Tucker, Section 18-13-99, on the Wyoming side of the Hiawatha Dome, is rigging up and expects to commence spudding within a few days. This test will be pushed as rapidly as possible before winter, which is quite severe in that region, sets in. On the Colorado side, the W. T. Morris interests have started cleaning out and deepening their No. 1 Wilson, Section 22-12-100, which showed for 47,000,000 feet of gas at 2,270 feet a year ago and which started the present activity in that region. The Reiter-Foster Oil Co.'s No. 1 State, Section 16-12-100, is drilling below 1,225 feet, and is putting its water line under ground so that operations may continue during the winter. The other drilling well in that area is the Ohio Oil Co.'s No. 1 Kuykendall, NE SE. Section 22-12-100, Colorado side, which is drilling below 840 feet in a new hole, the old hole being lost.

Utah

The first encouraging news out of Utah for some time came this week from the Midwest Exploration Co.'s No. 1 Hughes, Section 30-34-19, Elk Ridge structure, in San Juan County. This test, the only well drilling on an enormous structure embracing more than 80,000 acres within the 600-foot contour, and 150,000 acres within the closing contour, had a showing of heavy oil from a sandy lime stratum at 3,760-70 feet in sufficient quantities to paint the tools. Considerable gas accompanied the oil. There was about 600 feet of water in the hole when the showing was encountered and this had softened up the horizon and started caving. Total depth is 3,780 feet and the 6¼-inch casing is being run to shut off the water. The significance of the showing lies in the fact that it was found not very far above the depth at which the test is expected to encounter a sand that was approximately 200 feet thick in the Utah Southern Oil Co.'s test on the Cedar Mesa structure 40 miles to the south. This sand is in the lower Pennsylvanian.

John C. Howard, president of the Utah Oil Refining Co., one of the companies most prominently interested in the test, was quoted some time ago as saying the structure either is one of the biggest oil fields in the world or it is nothing. The next few weeks' drilling probably will disclose which of the predictions is the correct one. So far, there has been little to arouse enthusiasm until the showing at 3,760 feet was encountered. Of course, at present it can not be considered more than a hopeful indication, but it serves to renew interest in this rather unusual operation. The structure is described as having 8,000 square miles of drainage. The remoteness of the test in the La Sal National Forest made it an expensive test. It is understood that $40,000 was expended in building a 10-mile stretch of road from Kigalia to the location, another $40,000 was expended for equipment and casing and another $40,000 for the haulage. Another $10,000 was expended in the erection and organization of the camp. These items do not include the expensive geological work and other incidentals which had to be taken care of before the well commenced spudding.

A test of that kind eats into money rapidly and the Utah Oil Refining Co. invited other interests to join in the expense of making the test and received large blocks of acreage in exchange. Among the companies interested are the Utah Oil Refining Co., the Union Oil Co. of California, the California Petroleum Corp., the Associated Oil Co. of California, the Wyoming Associated Oil Co., Snowden & McSweeney, Gilmore Oil Co., Midwest Oil Co., and a number of others. All of these companies are under contract to put down one well each should oil be discovered. These facts make the test an operation of more than ordinary interest. The structure is located some distance south of the Colorado River salt domes and the geological conditions are entirely different.

San Juan County

The Union Oil Co. of California's No. 1 State, Section 16-30-25, Lisbon Dome, in San Juan County, struck another of the numerous gas pockets encountered in this test at 4,345 feet. The gas blew the tools up the hole and snapped the drilling line in two and resulted in a fishing job. The tools have been recovered and drilling again is under way. Most of these gas pockets have occurred in thin sandy lime and shale strata bedded in salt.

The Texas Production Co.'s No. 1 Shipley, Section 5-27-14, Sweetwater structure, is drilling in red sand at 1,225 feet. It encountered water at 1,200 feet in what is probably the Navajo sandstone.

Another test on the Crescent Eagle Dome in Grand County is in prospect. The Crescent Eagle Oil Co. drilled a well on Section 4-22-19 to a depth of 4,000 feet, the operation being in progress for several years. It has been shut down for some time and the hole is credited with having made a little of everything that comes out of the ground, including salt water, oil, gas, potash, etc. The company is reported to have assigned the well and several thousand acres surrounding it to the Allen Leasing Co., which is negotiating with a group of Texas operators with a view to putting down a joint test.

At the north end of the Great Salt Lake, two wells are drilling. Lakeside Oil Co.'s No. 1, Section 31-9-7, is underreaming in hard limestone at 2,670 feet to lower the 6¼-inch casing to make a water shutoff, and the Leonora-Raddatz Syndicate's No. 1, Section 14-9-8, is drilling at 2,060 feet in black lime.

New Mexico

There were no completions in New Mexico reported for the week and interest continued to center around the drilling wildcats in Eddy and Lea Counties in the southeastern part of the state. The Texas Production Co.'s No. 1 Rhoades, SE NE NW Section 22-26-27, south of Jal, in the southeast corner of Lea County, has not been able to make any new hole since striking another gas sand at 3,130 feet two weeks ago. There are two strings of fishing tools in the hole in addition to the drilling tools and considerable difficulty is being encountered in recovering them. A hold was secured on the tools and they were drawn part of the way up the hole when the increased gas pressure blew them farther towards the top. The top of the last string is now within 80 feet of the top of the hole where they have lodged. The gas flow is partially shut off at times and then comes back again. A gauge made September 17 showed about 11,000,000 feet of gas and another made four days later indicated 14,000,000 feet.

Texas Production Co.'s No. 2 Robinson, SW Section 25-16-31, in the Maljamar area of Eddy County, is making fairly good progress and is drilling in shale at 620 feet. Same company's No. 1 Lockhart, SW Section 5-22-38, Lea County, is waiting for the cement to set at 2,883 feet, where the 8¼-inch was landed. Steel line measurement shows a corrected depth of 2,765 feet for the bottom of the salt. Since passing out of the salt the hole has been in anhydrite. Same company's No. 1 Jackson, SE cor. Section 4-20-34, is drilling in hard lime at 3,710 feet and is at an interesting depth. This well has been reported to be on a magnetometer high, but now appears to be running only about the expected regional dip higher than the Covert well in Section 13-21-33. The other operation of this company in that region is its No. 1 Wilson, Section 29-17-18, on the Dunken Dome in Chaves County, which is drilling in shale at 4,674 feet.

Midwest Refining Co.'s new test in Lea County, its No. 1 State, NE cor. Section 9-19-38, just west of Hobbs, is building rig, but has been delayed by bad road conditions in moving equipment from its abandoned test in Quay County.

Test Is Delayed

The Bordages test near Nadine in Lea County, No. 1 Hughes, Section 27-19-38, is still delayed and it is probable that it will be several weeks before it gets under way. The rig and equipment are being moved from West Texas and it is reported that the delay is intentional in order to clear up titles on several small parcels of patented land around the test. The Exploration Co.'s No. 1 Record, Section 25-19-35, is still shut down at 4,005 feet after completing the original contract. The Stovall Drilling Co. is reported to have entered into a contract with the receivers for the Exploration company to deepen the test and drilling is about ready to resume. Several of the major companies, including the Empire Gas & Fuel Co. and the Texas Production Co., have acreage around the well and may aid in financing its completion. Inglefield & Bridges' No. 1 State, Section 4-17-34, is drilling in lime at 5,034 feet and swabbing at intervals for fuel oil, and is making better than 20 bbls. daily. Maljamar Oil & Gas Co.'s No. 1 Beardsley, NE Section 15-17-32, is fishing at 1,560 feet. The top of the salt was reached at 1,172 feet. Skelly Oil Co.'s No. 1 Lynch, Section 22-17-31, in Eddy County, is still fishing out the 5⅛-inch pipe. Total depth is 4,260 feet. They removed 110 feet the past week, but now have the spear hung up again and have been unable to knock off any more pipe. Pueblo Oil Co. is getting a good start in its No. 1 Gessert, Section 1-17-31, and is drilling at 450 feet.

In Eddy County, George F. Getty, Inc.'s No. 1 Rawson, SE cor. Section 14-20-29, in the Twin Hills area, was unable to clear the hole of lost tools and other difficulties and has decided to plug and abandon the well. Total depth was 1,665 feet. It is probable that the rig will be skidded half a mile to the west and that several shallow holes will be drilled in the block for subsurface information before making the location. Same

(Continued on Page 88)

EXTENSION OF OPERATIONS BY IMPERIAL OIL COMPANIES

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Oct. 1.—Further extension of drilling operations by Imperial Oil, Ltd., and its subsidiaries in the Turner Valley Field is indicated by the announcement that Royalite Oil Co. has located No. 10 well in NE Section 12-20-3w5, some 300 feet south of Royalite No. 8. Royalite No. 8, LSD 9, Section 11-20-3w5, is an offset to New McDougall-Segur No. 1 Dakota sand producer, and is drilling at 1,359 feet. Royalite No. 9, LSD 6, Section 13-20-3w5, is at 105 feet and cementing the 15½-inch casing.

Reports were current recently that Royalite Oil Co.'s No. 7, LSD 3, Section 13-20-3w5, had blown in with a tremendous flow of wet gas, estimated as high as 40,000,000 feet a day. These reports, however, have been officially contradicted. The rotary drill at No. 7 has apparently got the top of the Madison limestone and the casing has been cemented at 4,157 feet. Some wet gas has been encountered around this depth, but not enough to blow the mud out of the hole. In the upper horizons several small gas flows were encountered. The test will probably have to drill between 200 and 300 feet to reach the main producing horizon in the deep limestone.

Dalhousie Oil Co.'s No. 1, LSD 4, Section 18-20-2w5, is drilling at 4,248 feet after cementing casing at 4,211 feet. Dalhousie No. 6, LSD 10, Section 13-20-3w5, is at 4,495 feet with considerable gas flow and drilling. Dalhousie No. 5 producer, LSD 16, Section 30-19-2w5, is being given a production test with a gas lift; but no production figures are yet available.

Foothills Oil & Gas Co.'s No. 1, SW Section 26-20-3w5, is at 2,312 feet and drilling. It is reported that Doherty, Easson & Co. of Toronto have secured a 40-acre tract comprising LSD 14, Section 34-20-3w5, in the north end of the Turner Valley from Fergus Macdonald of Vancouver, and that they are acting for the Foothills Oil & Gas Co. in the deal. The new acreage is northwest of Section 26-20-3w5 in the southwest quarter of which Foothills No. 1 is drilling. The price for the 40-acre lease is stated to be $22,400 or $560 per acre. The Foothills Oil & Gas Co. has been gradually extending its acreage in the north end of the Turner Valley, and unofficial reports recently in circulation foreshadow the possible consolidation of all the Imperial Oil, Ltd., subsidiaries in this one company.

Close to the Dakota

New McDougall-Segur Oil Co.'s No. 2, LSD 14, Section 12-20-3w5, is drilling close to the Dakota sand producing horizon at 2,510 feet. The drill got a show of black crude at 2,390 feet and a small show of green crude at 2,415 feet, but neither amounted to commercial production. The showings indicate that No. 2 is 165 feet deeper on the structure than No. 1, which got production at 2,595 feet.

Illinois-Alberta Oil & Refining Co.'s No. 2, LSD 14, Section 12-20-3w5, is reported to have a diamond drill outfit rigged up ready to spud in for a deep test. Illinois-Alberta No. 1, same LSD, is making 85 to 87 bbls. a day of crude

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Seal Beach Field Starting Downward

Indications It Has Gone Over the Top. Last High for Alamitos Heights. California Likely to Decline

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., Oct. 1.—All indications point to the fact that Seal Beach went over the top last week and will start down in the very near future although there is still an unusually large quota of deepening projects scheduled for completion in the deep zone. This will undoubtedly be the last high as far as the Alamitos Heights town lot area is concerned, although the production in the older section of the Seal Beach Field could be stepped up very appreciably if desired. The Associated, Standard, and Marland, however, are in no hurry to deplete their holdings and consequently the output will be kept down to a minimum until conditions improve. These companies are not engaged in uneconomical intensive drilling in the older section of the field and a lot of unnecessary offsetting work has been eliminated by a gentlemen's agreement affecting the location of new wells. In contrast to the mad rush under way in the Alamitos Heights section, drilling operations in the old field have been kept down to an absolute minimum, although the Marland has been forced to drill a double line of offsets in the northern part of its Selover lease which fronts on the town lot area in order to prevent undue drainage.

With Seal Beach probably past its peak and destined to start its last descent the industry is naturally interested in ascertaining the future status of this field. In order to clarify the situation and alleviate any apprehension which may exist in respect to the future of Seal Beach, due to intensive development work under way in the town lot area, it would not be amiss to call attention again to the fact that the recent upward trend of this field has been due to the completion of a large number of new wells and not because of the finishing of a small number of large producers. In the ordinary course of events, therefore, daily production will fall off quite appreciably as soon as this drilling orgy draws to a close and from present indications it won't be long now. Recent completions in the town lot area have failed miserably to hold up to anything like their initial production and for the past few weeks the writer has endeavored to lay stress upon the fact that Seal Beach is in no way comparable to Greater Seminole, or that vast area generally referred to as West Texas, as Alamitos Heights is just about on its last legs. It is axiomatic that no town lot area can sustain intensive drilling for more than a limited period of time and that equation sums up the present situation at Seal Beach to a nicety. At any rate Seal Beach has ceased to be a threat and with preliminary indications of depletion already in evidence and becoming more apparent every day it will begin sliding downward at a rapid rate in the very near future.

California on Decline

The probability of an early drop at Seal Beach is naturally of paramount importance because this decline will be reflected in California's total daily output. Decline curves indicate that State production will be down to around 610,000 bbls. per day at the end of the year. There is a possibility that total production may drop below the 600,000-bbl. mark during the early part of next year but this will be only a temporary condition as there are at least two promising wildcat areas under development which may result in the opening up of additional acreage. One is the Seacliff district west of the prolific Ventura Avenue Field in Ventura County where the Pan American has the makings of what looks to be a good producer in No. 1 State around the 3,000-foot level. This property was taken over by the Chanslor-Canfield Midway Oil Co. after that concern had demonstrated the possibilities of the immediate area by logging an oil sand in its Nos. 1-A and 1-B on the Hobson Ranch to the east several months ago. No. 1 State of the Pan American is located within a stone's throw of the Pacific Ocean and if it results in commercial production the company will move out into the open sea as it also has drilling concessions out beyond the high tide line. The Union Avenue, or Casa Loma district in Kern County is another rather promising wildcat territory which may break into the limelight at any time as intermittent tests have indicated the presence of a light refining oil. It is only a question as to whether it exists in commercial quantities. Potrero and another area not yet drilled but which looks exceptionally good from a geological standpoint bring up the rear. It is also evident that while California's daily production will reflect the drop at Seal Beach, possible new fields should keep the total State output at a rather high rate during the coming year. Some are inclined to minimize the possibility of opening up additional fields through the center of the San Joaquin Valley but take a tip and watch this section very carefully during the next year.

Seal Beach

The Petroleum Securities, pioneer operator in the Alamitos Heights town lot area and naturally the largest individual operator in that section, closed a rather busy week, during which 4 wells were put on production. This concern is still running 18 strings of tools and indications point to additional completions during the next 30 days. The company's best completion was No. 2 Murphy, a new well which came in under a natural flow doing 1,950 bbls. of clean 20.2 gravity oil daily from 5,550 feet. No. 1 Dexter, a recompletion after being redrilled and deepened from 4,891 feet to the lower zone at 5,450 feet, was also a good well as it came in flowing 1,320 bbls. of clean 29.1 gravity oil daily. No. 1 Kindig, which was finished late last week but which did not complete its initial 24 hours' test until several days ago, ran true to form as it came in doing 1,170 bbls. of 28.7 gravity oil daily upon recompletion in the lower sand. No. 1 Marquis is being listed as a 1,300-bbl. recompletion at 5,490 feet, the oil being clean and testing 29.3 degrees.

This well has had a rather interesting career as it was the first project to take advantage of the maximum penetration afforded in the upper, or Selover zone. During the early stages of development operators were content to produce from the upper 25 feet as no one knew the extent of the Selover sand at that time and were playing a safe game by not taking any chances of encountering bottom water. Production subsequently fell off, however, as would naturally be expected with wells only producing from a 25-foot oil sand, and No. 1 Marquis was selected by the Petroleum Securities as a test to determine the maximum thickness of the Selover horizon. It was accordingly carried down and completed in May of this year as a 3,500-bbl. flowing well from 4,860 feet. This completion, which showed the Selover zone to have a maximum thickness of 180 feet instead of the 25 feet as originally believed, was responsible for the second production peak established by Seal Beach as other projects were immediately deepened in order to take advantage of the additional thickness of sand opened up. It is rather late in getting down to the second horizon, generally called the Wasem or Wahl zone, but this has been due to the fact that it has shown a good production up until a short time ago.

Exceptionally Good Well

The California Petroleum finished an exceptionally good well as the result of the recompletion of No. 1 Alamitos, redrilled and deepened from 4,928 to 5,548 feet. Upon being turned loose a few days ago it came in flowing 2,550 bbls. of unusually clean 29.3 gravity oil daily, the cut being almost negligible. It is flowing through a 1-inch bean under a pressure of 190 pounds on the casing and 460 pounds on the tubing. This company is deepening four other wells at present but, judging by their status, it will probably be two weeks or so before any of this quartet will be listed for completion. The California Eastern's No. 3 Judson, which came in last week flowing 3,180 bbls. from 5,400 feet, is holding up with clocklike regularity and has only shown a decline of 500 bbls. in the 10 days since completion. This company has seven additional wells nearing completion in the lower sand and, unless something unforeseen develops, three or four will be tanking oil within the next week.

(Continued on Page 120)

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, Well, Location—	S-T-R	Depth	Status
Cal. Eastern, No. 1 Cypress, Potrero	27- 3-14	5,043	suspended
Associated, No. 1 Cypress, Potrero	34- 2-14	4,450	deepening
Mont. Park Oil Co., No. 1 Brown, Monterey Park	26- 1-12	2,010	hd. sd. drilling
Circle Oil Co., No. 1 Pomeroy, Manchester	23- 3-14	4,280	suspended
Shell, No. 1 Mission, San Fernando	4- 2-15	3,965	hd. sd. drilling
Sou. Calif. Drlg. Co., No. 1 Matteson, El Segundo	1- 3-15	4,870	plug back
Carr, O. P. No. 2 Foster, San Juan Capistrano	13- 8- 8	3,800	hd. sd. drilling
Thomason & McCoy, No. 1 Rinz, Saugus	27- 5-16	1,610	suspended
Southwest Pet. No. 1 Ramsauer, Watts	4- 3-13	3,425	hd. sd. drilling
San Clemente Oil Co., No. 1 Peck, Hawthorne	20- 3-14	4,530	set 8¼-inch
West. Oil & Ref. Co., Well No. 1 Haw horne	29- 3-14	479	sd. drilling
White Behr, No. 1 Watson, L. A. County	21- 4-14	Rig	rigging up
Shell, No. 1 Allec, Placentia	31- 3- 9	3,841	sd. sh. drilling
Standard, No. 1 Olive, Orange Co.	17- 4- 9	3,801	hd. sd. drilling
Son. C. A., No. 1 Pinker on, Orange Co.	5- 5-11	2,411	gr. sd. drilling
Stein, Leo, No. 1 Long, Orange Co.	21- 5-11	450	sd. drilling
Standard, No. 1 Rindge, Palms	36- 1-15	Rig	in litigation
Hemet Pet. Co., No. 1 Ward, Riverside Co.	9- 5- 1	1,400	hd. sd. drilling
Anchor Oil Co., No. 1 Hudson, Los Angeles Co.	19- 2-10	1,880	br. sh. drilling

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Associated, No. 1 Smith, Kettleman Hills	12-23-18	2,043	suspended
Bolsa Chica, Well No. 1, Kettleman Hills	30-23-19	3,440	sd. sh. drilling
General Pet., No. 1 Burbank, Kettleman Hills	30-23-19	3,105	pipe bad
General Pet., No. 2 Oschener, Kettleman Hills	26-22-18	4,542	gr. sd. drilling
General Pet., No. 1 Dome, Kettleman Hills	4-24-19	3,800	fishing
C. C. M. O., No. 1 McGlashan, Kettleman Hills	17-24-19	5,000	hd. sd. drilling
South Coalinga, Well No. 1, Kettleman Hills	35-24-19	2,903	sd. sh. drilling
McPhail, Hugh, Well No. 1, Kettleman Hills	13-24-18	2,160	hd. sd. drilling
Superior Oil Co., Well No. 1, Kettleman Hills	26-21-17	2,619	bl. sh. drilling
Milham Explrn., No. 1 Kettleman, Kings Co.	2-22-17	4,290	hd. sd. drilling
Shell, No. 2 Berlywood, Moorpark	32- 3-20	5,305	slight show
C. C. M. O., No. 1 Robson, Ventura Co.	22- 3-24	6,600	clean. out
C. C. M. O., No. 1-B Hobson, Ventura Co.	16- 3-24	5,230	br. sh. drilling
Pan American, No. 1 State, Ventura Co.	17- 3-24	3,046	good oil sand
Pan American, No. 1 U. S., Ventura Co.	17- 3-24	Rig	suspended
Scott Petroleum, No. 1 Surf, Ventura Co.	35- 4-24	522	suspended
Continental Oil Co., No. 1 Burnham, Ventura Co.	22- 5-18	3,077	gr. sd. drilling
Standard, No. 1 Camarillo, Ventura Co.	29- 2-20	5,620	hd. sd. drilling
Petroleum Sec., No. 1 Diablo, Ventura Co.	26- 5-18	3,130	gr. sd. drilling
Parkford, E. A., No. 1 Strathern, Ventura Co.	5- 2-18	3,750	br. sh. drilling
Shell, No. 1 Strathern, Ventura Co.	6- 2-18	....	location
S ar Petroleum, No. 1 Canet, Ventura Co.	13- 3-23	5,240	fishing
Richfield, No. 27 Piru, Ventura Co.	35- 5-18	1,902	suspended
Milham Explrn., No. 2 Buttonwillow, Kern Co.	8-28-23	4,662	gas well
Milham Explrn., No. 3 Buttonwillow, Kern Co.	7-29-24	4,150	cleaning out
Pacific Eastern, No. 1 Fruitvale, Kern Co.	21-29-27	Mtl.	building rig
Pacific Eastern, No. 1 Bakersfield, Kern Co.	6-30-28	4,392	will deepen
General Pet., No. 1 Edison, Kern Co.	5-30-29	2,460	sd. sh. drilling
Shell, No. 1 Mon Bluff, Kern Co.	3-28-28	2,150	sd. drilling
Kern-in & Seal, No. 1, Edison, Kern Co.	4-30-29	Rig	suspended
Getty, George F., No. 1 Edison, Kern Co.	22-29-29	2,014	br. sh. drilling
Mays & Valencia, No. 1 Greenfield, Kern Co.	31-30-28	Rig	rigging up
C. C. M. O., No. 1 Quinn, Delano	23-25-27	2,281	plug back
North American, No. 1 Wallace, Delano	5-25-26	1,033	sd. drilling
Sayers, R. H., No. 1 Poso, Kern Co.	7-26-18	Rig	rigging up
Fresno Madera Oil Co., No. 1 Clovis, Fresno Co.	18-21-21	3,800	hd. sd. drilling
Richfield, No. 1 Wreden, San Luis Obispo Co.	10-29-17	721	cemented
Shell, No. 1 Cowell, San Mateo Co.	8- 6- 5	4,589	hd. sd. drilling
Shell, No. 1 Ashton Craft, San Mateo Co.	17- 6- 5	2,500	suspended
Shell, No. 1 Murphy, Petaluma	29- 5- 6	6,360	hd. sd. drilling
Shell, No. 2 Murphy, Petaluma	8- 5- 6	1,140	set pipe
Thomas & Hamill, Well No. 1 Alameda Co.	16- 3- 3	1,380	hd. sd. drilling
Elliott & Clarke, No. 1 Marcos, Santa Barbara Co.	3- 6-29	2,260	hd. sd. drilling
Becker, Geo. F., No. 1 Summerland, Santa Barb. Co.	33- 4-25	3,080	set pipe
Birch Oil Co., No. 1 Porterville, Tulare Co.	13-20-26	2,997	bl. sd. drilling
Union Oil Co., No. 1 Huasna, San Luis Obispo	26-32-15	....	location

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total This Week	Daily Average	Total Last Week	Daily Average	This Year to Date	Same Time Last Year
Crude oil	169,569	24,224	149,069	21,296	7,424,804	9,214,273
Fuel oil	383,338	54,763	149,487	21,355	5,953,462	5,314,089
Diesel and gas oil	.....	.....	148,144	21,163	2,150,213	2,205,935
Gasoline	170,748	24,392	343,099	49,014	6,551,670	5,084,384
Tops	.....	.....	.....	.....	.....	223,156
Coastwise—						
Crude oil	406,908	58,130	468,641	66,949	18,805,140	17,283,567
Fuel oil	175,179	25,026	281,225	40,175	8,918,440	8,001,782
Diesel and gas oil	1,974	282	19,695	3,242	297,326	147,411
Gasoline	214,961	30,709	126,073	18,012	6,717,221	5,395,438
Kerosene	9,743	1,392	.....	.....	147,218	151,091
Tops	.....	.....	.....	.....	104,595	476,612
Exports—						
Crude oil	65,274	9,325	44,179	6,311	1,883,535	3,158,516
Fuel oil	573,734	81,962	575,310	82,173	20,027,919	12,746,307
Diesel and gas oil	.....	.....	27,650	3,950	928,922	328,911
Gasoline	147,369	21,053	341,048	48,721	3,478,792	3,273,538
Tops	.....	.....	.....	.....	227,204	.....
Kerosene	.....	.....	.....	.....	1,551,344	2,157,803

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC, GULF COAST PORTS

Fuel oil	.....	.....	.....	.....	.....	78,653
Diesel and gas oil	.....	.....	91,550	13,079	597,168	1,295,118
Gasoline	.....	.....	.....	.....	1,418,705	853,312
Tops	.....	.....	.....	.....	.....	73,698
Lubricants	.....	.....	.....	.....	303,016	275,228
Coastwise—						
Fuel oil	199,806	28,544	.....	.....	4,040,916	3,901,000
Diesel and gas oil	.....	.....	.....	.....	207,012	.....
Gasoline	236,257	33,751	146,671	20,953	3,901,252	3,530,189
Kerosene	5,100	729	4,518	645	161,590	276,127
Exports—						
Fuel oil	.....	.....	74,681	10,669	2,132,752	2,674,118
Gasoline	.....	.....	69,532	9,933	2,215,261	1,421,079
Kerosene	61,092	8,727	.....	.....	654,079	1,537,507
Lubricants	.....	.....	.....	.....	18,370	26,810

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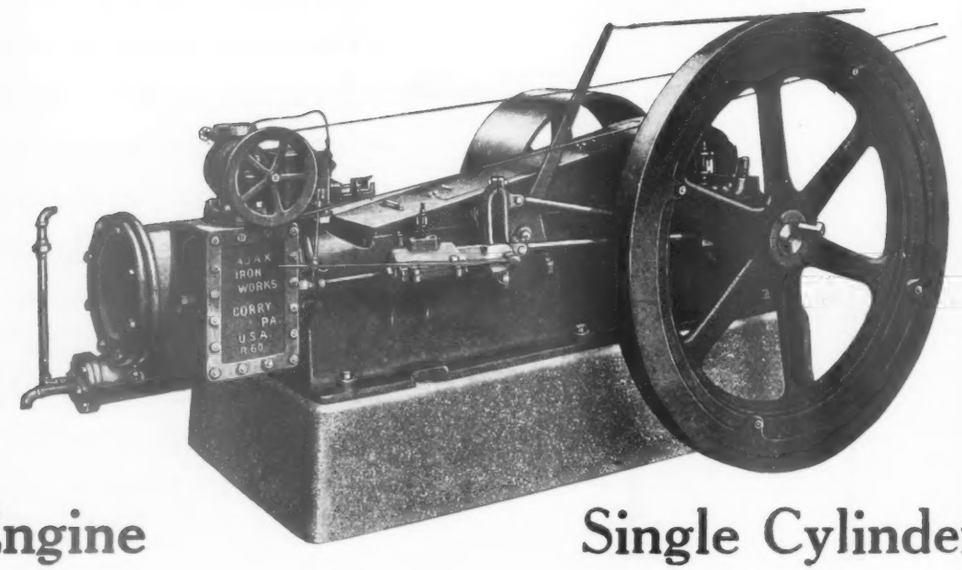

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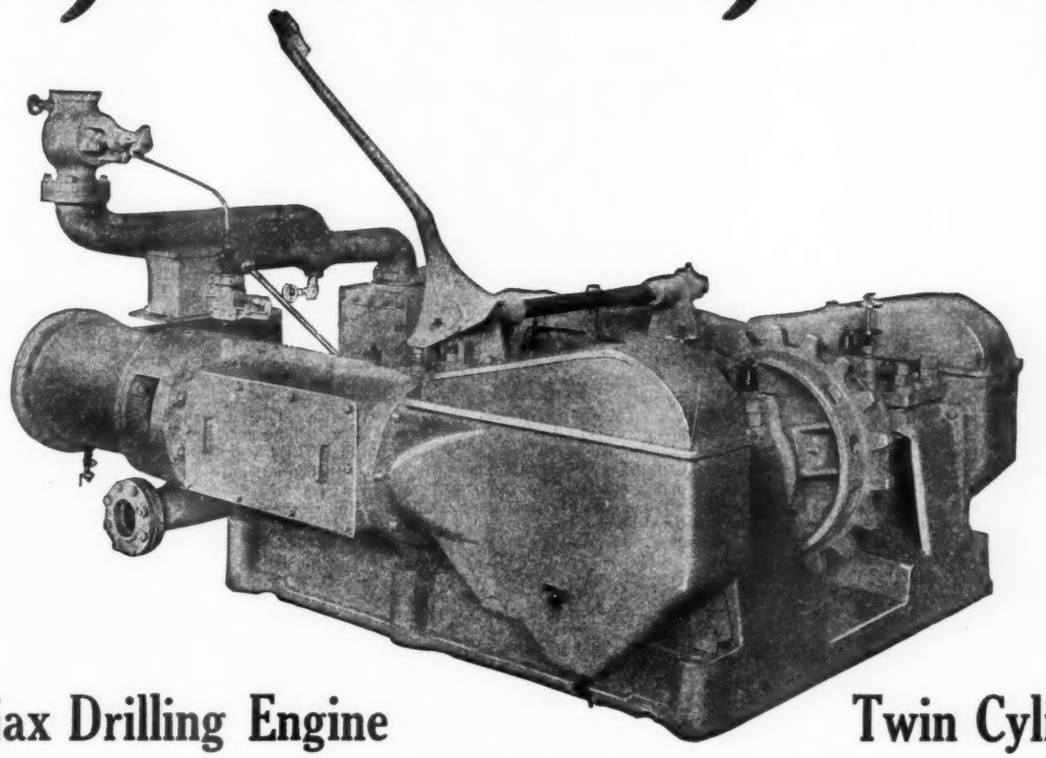

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Larger Than Average Wells in East

More New Production Than in Any Week in Months. New Work in Birch District, Braxton County, W. Va.

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., Oct. 3.—Since the eastern fields were last reviewed they show a little improvement in the size of the wells completed and furnished more new production than for any one week in a number of months. The reports from the various districts show more wells were completed in September than in August, but the new production was very little more than in August. There was an increase in dry holes and gas wells, the latter totaling 73, the largest number since last winter. At the same time there were more rigs up and fewer wells drilling at the close of the month.

No locality in the eastern fields claimed more than the usual amount of activity. For the most part all were located in defined territory. Operators are making little or no effort to find strictly new producing territory. After a period of many months, there is quite a little new work starting in Birch district, Baxton County, West Virginia. The Philadelphia Co. is sponsoring this work. Producers are not selling credit balances quite so freely, in anticipation of an advance in the crude oil market.

Best Completions for Week

In the northeast quarter of Section 11, Westland Township, Guernsey County, the Leonard Oil & Gas Co. completed in the Niagara lime No. 3 on the James Joyce & Co.'s farm. At a total depth of 3,710 feet it produced 150 bbls. the first 24 hours. In the northeast quarter of the same section and township, David Brothers Co. completed in the same formation No. 4 on the R. F. Ruby farm. It produced 60 bbls. the first 24 hours.

Perry County

In the northeast quarter of Section 20, Madison Township, Perry County, William Cline and others completed in the Clinton sand a second test on the Timmins Coal Co.'s property. It produced 80 bbls. the first 24 hours. It has not been shot. In the northeast quarter of Section 28, Coal Township, the Chartiers Oil Co. completed and shot in the Clinton sand No. 205 on the Hocking Valley Products Co.'s property and got a 40 bbl. producer.

Holmes and Hocking Counties

In Section 16, Hardy Township, Holmes County, the Pure Oil Co. completed in the Clinton sand No. 6 on the Warren Close farm. It produced 80 bbls. the first 24 hours after shot in the Clinton sand. In the northwest quarter of Section 11, Green Township, Hocking County, West Snyder and others have completed and shot in the Clinton sand a test on the G. H. Guess farm. It produced 50 bbls.

In the southwest quarter of Section 6, Jackson Township, Guernsey County, W. Mack Smith & Co. have completed No. 5 on the Andrew Slabie farm. It produced 75 bbls. the first 24 hours after drilled into the Niagara lime pay at a total depth of 3,570 feet.

Ritchie County

In Murphy district, Ritchie County, West Virginia, the Hope Natural Gas Co. drilled a test on the J. L. Hill farm into the Big Injun sand and it produced 90 bbls. the first 24 hours. In the same district, C. S. Morris & Co. completed a test on the J. M. Reymer farm, good for 50 bbls. a day in the Maxon sand.

Late Completions

The Ohio Oil Co.'s test on the John Kasner farm, in Section 2, Monroe Township, Coshocton County, is a gasser good for 1,250,000 feet and showing a little oil. In the southeast quarter of Section 20, Westland Township, Guernsey County, Davis Brothers Co. has a 45-bbl. producer in the Niagara lime at a test on the Paul Micha farm. In Lot 14, Monroe Township, Holmes County, the Rocky River Oil Co. has completed in the Berea grit a test on the S. A. Martin farm. The show of oil is so light as scarcely to pay for operating it as a producer.

In Section 22, Washington Township, Monroe County, Crew-Levick Co. has a light pumper in the Berea grit at No. 10 on the G. W. Allen farm. In Section 1, Franklin Township, Shay, McMullin & Co. have the rig completed for another test on the P. S. Stoffle farm. In Section 1, Reading Township, Perry County, Scott Willison and others are drilling a test on the George Folk farm. In Section 13, same township, the Ohio Fuel Supply Co. is drilling a test on the D. G. Love farm.

Carroll County

In the southwest quarter of Orange Township, Carroll County, the Leesville Oil & Gas Co. has a duster in the Berea grit at a second test on the A. Riggle farm. In the same quarter section, same county, the same company completed a second test on the same farm and had no better luck.

In the southeast quarter of Section 3, Rush Creek Township, Fairfield County, R. P. Hass & Co. have completed a test on the James A. and J. C. King farm, good for 5 bbls. a day.

Gasser and Duster in Morgan

In Section 3, Deerfield Township, Morgan County, Joseph Pierce and others have completed a test on the William Mair farm. It is a duster in the Berea grit. In fractional Section 33, Marion Township, 4 miles west of Chesterhill, Morgan County, the Bowman Oil & Gas Co. has completed in the stray below the Berea grit, a test on the J. H. Woolman farm. It is a gasser good for 250,000 feet.

Athens County

In the Fisher Pool, Section 30, Alexander Township, Athens County, the Townsend Oil & Gas Co. has completed a test on the Sarah E. Penrod farm. It is a 5-bbl. pumper in the Berea grit. In the same pool, Section 7, Cook & Co. have completed a test on the Sheldon Woodyard farm. It is a duster in the Berea grit.

Niagara Lime Producer

In the northeast quarter of Section 10, Westland Township, Guernsey County, the Pure Oil Co. has completed in the Niagara lime a second test on the Frederick Gillam farm. It produced 25 bbls. the first 24 hours. In the southeast quarter of Section 2, Fallsbury Township, Licking County, the Arkansas Fuel Oil Co. has completed No. 3 on the C. F. Mizer farm, good for 10 bbls. a day in the Berea grit.

Fair Producer in Hocking

In the northeast quarter of Section 28, Coal Township, Hocking County, the Chartiers Oil Co.'s No. 205, on the Hocking Valley Products Co.'s property, is good for 40 bbls. a day in the Clinton sand. In Section 13, the Sweezy Oil Co. has a duster in the Clinton sand at a test on the Eliza Woolover farm.

Near Athens, Section 14, Athens Township, Athens County, Gross and others have completed in the Berea grit a test on the Virgil Maxwell farm. It is a very light pumper good for less than a barrel a day. At Jerseyville, Section 36, Lodi Township, Athens County, W. W. and A. T. Wehrle have drilled through the Berea grit a test on the Hugh Mulligan farm. It is a duster.

In the northwest quarter of Section 35, Mill Township, Tuscarawas County, the Stillwater Oil & Gas Co. has completed in the Berea grit No. 5 on the Frank A. Morris farm. It is a 3-bbl. pumper. In Section 3, Hanover Township, Licking County, E. J. Edmons & Co. have completed in the same formation No. 3 on the John C. Williams farm. It is not good for more than 2 bbls. a day.

West Virginia

On Wolf Camp Run, 3 miles southeast of the Virginian Gasoline & Oil Co.'s test on the Alice Westfall farm, the National Oil & Gas Co. is starting a wildcat on the D. I. Horner farm.

At Alum Cave, Grant district, Ritchie County, J. W. Jonas has completed No. 27 on the West Virginia tract good for 3 bbls. a day in the salt sand. On Dry Ridge, same district, the Astron Oil Co. has started to drill No. 7 on the Herman Stursburg Realty Co.'s tract. In the same district, J. G. Charter & Co. are moving a drilling machine to a location on the S. Tennant farm.

Calhoun County

On Sycamore Creek, Sherman district, Calhoun County, the Hope Natural Gas Co. has completed in the Big Injun sand a No. 3 on the Okey Parsons farm. It is a duster. On Steer Creek, Center district, Gilmer County, the same company's No. 10, on the Lewis Bennett farm, is a gasser in the Big Injun sand.

In Greene district, Wetzel County, Rawe Brothers completed through all sands their test on the Frank Leasure farm. It is dry in all formations. In Sardis district, Harrison County, the Conservative Gas Co.'s test on the S. F. Flanagan farm is dry in all sands.

In Center district, Gilmer County, the Hope Natural Gas Co. has drilled down an old well and it is a gasser in the Big Injun sand. In the same district, the same company drilled down to the Maxon sand No. 1 on the J. E. Arbuckle farm. It is also a gasser.

In Sheridan district, Calhoun County, the Hope Natural Gas Co. drilled down to the Big Injun sand No. 1 L. B. Collins farm. It is a gasser. In Lee district, the Ohio Fuel Oil Co.'s test on the James L. Stump farm is through the Gordon sand and is a gasser. In Sheridan district, the Chemical Oil Co.'s test, on the Bennett-Sanders farm, is a gasser in the salt sand. In the same district, Godfrey L. Cabot's No. 3, on the A. Garretson farm, is a gasser in the salt sand.

The Morley Oil & Gas Co.'s test, on the Sergent School lot, in Geary district, Roane County, is a gasser in the Big Injun sand. In the same district, the United Fuel Gas Co.'s test, on the N. M. Parsons farm, is a gasser in the Big Injun sand.

Cabell County

At the close of the week the West Virginia fields completed many more gassers than oil producers. On the waters of Merits Creek, McComas district, Cabell County, the Commercial Gas Co. completed and shot in the stray below the Berea grit a test on the Joshua Nicely farm. It is a gasser good for 400,000 feet. The location is 1,800 feet north of the test on the Thomas Childress farm. On the same stream and in the same district, the same company has completed and shot in the stray sand a test on the M. R. Hale farm. It is a gasser good for 350,000 feet. On Big Two Mile Creek, Grant district, the Big Two Mile Gas Co. has completed in the Berea grit a second test on the J. H. Harshbarger farm. It is a gasser good for 450,000 feet.

In Union district, Lincoln County, Wysong & James have completed a gasser on the Roberts-Nanderling farm. In the same district, D. G. Beahler has a gasser on the J. B. Rushman farm. In Carroll district, L. R. Sweetland's No. 19 on his own farm is a gasser in the Berea grit.

Clay County

In Henry district, Clay County, the United Fuel Gas Co. has completed in the Big Injun sand a test on the T. S. Hanshaw farm. It is a fair gasser, 1¾ miles east of the same company's test on the D. R. Spencer farm. In the same district and county, the South Penn Oil Co. has completed in the same formation No. 60 on the O. D. Stockley farm. It is good for 5 bbls. a day and is 600 feet east of No. 59 on the same farm.

Dry in Lower Sands

In Mooresville voting precinct, Clay district, Monongalia County, the South Penn Oil Co. has drilled No. 3 on the George Tennant farm from the Big Injun sand through all lower sands and found nothing. It was formerly a light producer in the Big Injun sand and will be plugged back to the Big Injun sand and again put to pumping. It will make a light producer.

The South Penn Oil Co. has completed in the Berea grit a second test on the M. M. and W. W. Pratt farm, in Union district, Wood County. It is a very light pumper. In Walker district, the same company has a rig completed on the Charles Shattuck farm.

In Center district, Wetzel County, the Manufacturers Light & Heat Co. has completed and shot in the Gordon sand its test on the Joseph Kirkland farm. It is good for 3 or 4 bbls. a day. In Jefferson district, Lincoln County, G. I. Ray & Son's test on the James Cooper farm is a gasser in the Berea grit.

In Grant district, the Mellon Oil Co.'s test on the C. M. Lewis farm is a gasser in the Berea grit. In the same district, the Hope Natural Gas Co. has drilled a test on the J. T. Cain farm through the Berea grit and dry. When drilled through the Maxon sand a light show of oil was developed in that formation and will probably make a 2-bbl. pumper.

Good Gasser in Mingo County

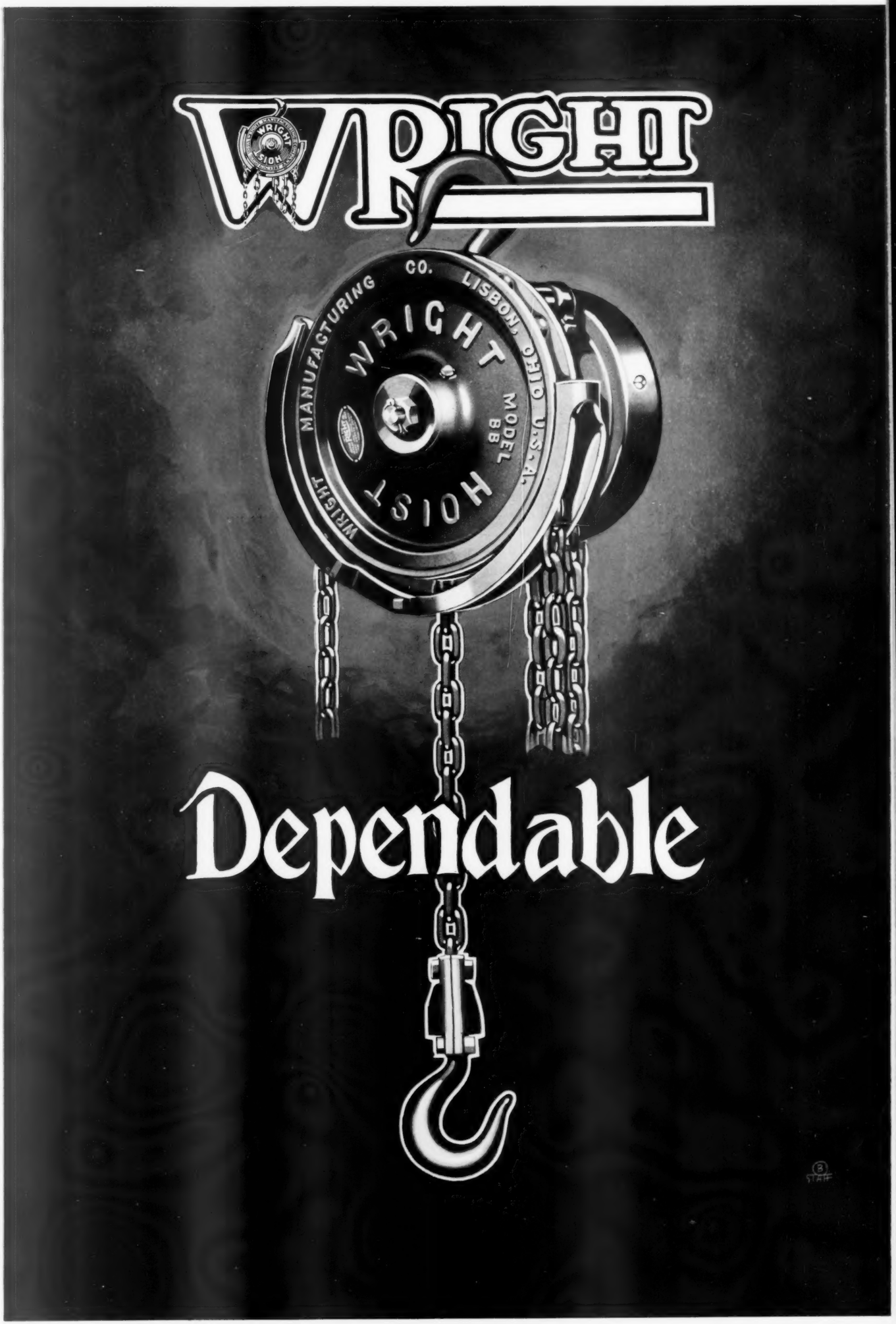
On Alley Trace Branch of Breedens Creek of Twelve Pole Creek, Harvey district, Mingo County, the Public Gas Corp. has drilled No. 27 on the Logan Cannel Coal Co.'s tract into the Maxon sand and at a total depth of 1,485 feet has a gasser good for 4,000,000 feet. The location is 650 feet northeast of No. 25 on the same tract. In Lincoln district, Marion County, the Hope Natural Gas Co.'s test on the M. C. Snodderly farm is a gasser in the Big Injun sand.

Where Tests Are Drilling

On Tanners Run, 1 mile east of the Benson Oil Co.'s test on the Riddle Brothers' farm, in Murphy district, Ritchie County, J. G. Cothran has made a location on the David McGregor farm. In Grant district, the Freehold Oil & Gas Co. has made a location for a second test on the Calvin & Robert Templeton farm, in the same district, Robert Rinehart is due in the salt sand at a test on the O. C. Thomas farm. The Junior Oil Co. has shut down at its test on the John Hickman heirs' farm. The Hope Natural Gas Co. is due in the Big Injun sand on the J. T. Cain farm.

In the northwest quarter of Section 15, Hopewell Township, Muskingum County, Ohio, the Mid-East Oil Co. completed in the Clinton sand its test on the Moses Porter farm. It is a light gasser. In Section 21, Fallsbury Township, Licking County, Sterl C. Brown has completed in the Berea grit No. 5 on the

(Continued on Page 98)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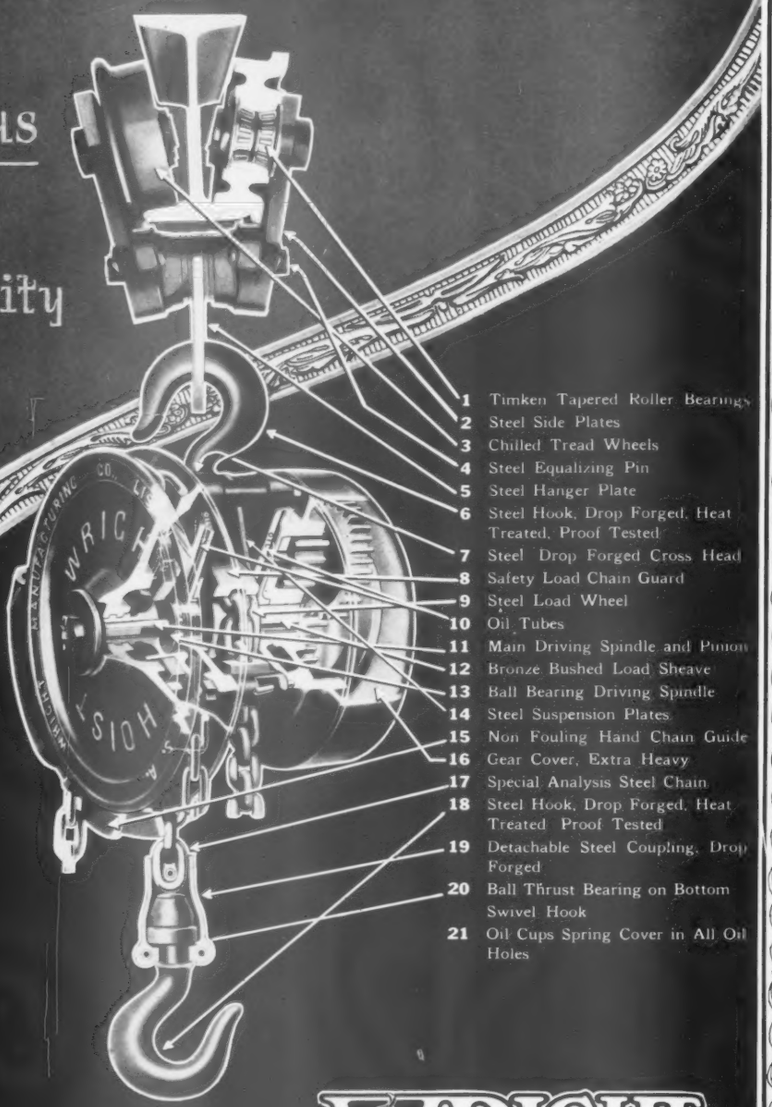


1 Timken Tapered Roller Bearings
2 Steel Side Plates
3 Chilled Tread Wheels
4 Steel Equalizing Pin
5 Steel Hanger Plate
6 Steel Hook, Drop Forged, Heat Treated, Proof Tested
7 Steel Drop Forged Cross Head
8 Safety Load Chain Guard
9 Steel Load Wheel
10 Oil Tubes
11 Main Driving Spindle and Pinion
12 Bronze Bushed Load Sheave
13 Ball Bearing Driving Spindle
14 Steel Suspension Plates
15 Non Fouling Hand Chain Guide
16 Gear Cover, Extra Heavy
17 Special Analysis Steel Chain
18 Steel Hook, Drop Forged, Heat Treated Proof Tested
19 Detachable Steel Coupling, Drop Forged
20 Ball Thrust Bearing on Bottom Swivel Hook
21 Oil Cups Spring Cover in All Oil Holes

WRIGHT
MANUFACTURING COMPANY - LISBON, OHIO

Very Active Week in the Central West

Central Ohio Leads With 19 Completions; Lima Has 9. Good Gas Wells Are Uncovered in Several of the Fields

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Sept. 26. — A very active week prevailed in the four divisions of the Central West Field, with central Ohio leading with 19 completions reported, while the Lima Field had 9 new wells, Indiana 2 and Illinois 6. With this large number of new wells, there were no wells larger than 30 bbls. initial, and only two of that production. One is on the Smith Neely farm, in Dennison Township, Lawrence County, Illinois, and the other on the Mary M. Austine No. 2 farm, in McDonel Township, Hardin County, in the Lima Field.

Some good gas wells were uncovered in several areas of the Central Ohio Field, including the bringing in of a test on the Howard farm, in Columbia Township, Lorain County; one of 4,000,000 feet in Coshocton County, and several excellent gas producers in the Cleveland Field, in Dover, Strongville and Olmstead Townships of Cuyahoga County.

More old wells were abandoned in the Lima Field of northwestern Ohio during the past few weeks than were completed during the month, and this material will be utilized for the drilling of new wells.

Lima Field

Pulling machines over the old Lima Field of northwestern Ohio have been working overtime pulling out old wells that have practically been exhausted, or are too small to pay for the expense of pumping. A total of 63 were reported during the week.

The only completion for the week in the old Wood County area was a dry hole drilled by George Hoffman and others, 1,250 feet from the north line and 410 feet from the west line of the Charles F. Ketter farm, Section 23, Perrysburg Township. It is the second well on the farm and 1,050 feet south of No. 1. Trenton was topped at 1,262 feet and an abundance of salt water found at 22 feet in the sand. A wildcat is being drilled by W. J. Lyon and others on the George L. Dailey farm, Section 34, Webster Township, and near West Millgrove, in Perry Township, same county, the West Millgrove Gas Co. is drilling a test on the C. R. Rosendale farm, Section 34.

In Hancock County, Pleasants Township, near McComb, McClure & Schrack are drilling No. 5 on the Sarah Rader farm, and the Bath Township Oil Co. is drilling No. 7 on the John A. Bryan farm, both in Section 14. In Eagle Township, southwest of Findlay, B. Porter and others are drilling No. 28 on the J. H. Haley farm, Section 5, while in Portage Township, Mathias Brothers are doing the same at No. 13 on the Isaac Hart farm, Section 27.

In Allen County, northeast of Lima and between there and Findlay, W. W. Botz and others' No. 1 on the Charles E. Landis farm, Section 14, showed an initial production of 10 bbls. C. A. Peavey is drilling No. 5 on the C. M. Lenney farm, Section 1, and the Carman Oil Co. is drilling No. 2 on the William B. Hall farm, Section 13. In Spencer Township, the South Fork Oil Co. is drilling No. 5 Ed Reynolds farm, Section 27.

Auglaize Most Active

Auglaize County, one of the most active in the Lima Field at this time, reports no new wells in for the week, but quite a number have been started. In Logan Township, Wesley Sprague and others are drilling No. 1 on the P. Ramaga farm, Section 26. In Washington Township, the Brookside Oil & Gas Co.'s No. 7, on the F. H. Kuckerman farm, Section 29, is showing for a nice well and No. 8 is starting, while the Real Oil Co. is working at a second test on the Ben Weirville farm, same section. In Noble Township, the Bowman Oil Co. is drilling a test on the F. Jesdan farm, Section 13, and the Petroleum Producing Co. is drilling No. 3 on the Joseph Whitney farm, Section 10. In Salem Township, Stelzer & Boyd are working at No. 7 A. J. Gierhart farm, Section 5. In Douchouquet Township, Henry Vossler is drilling No. 6 J. F. Kohler farm, Section 7. In Wayne Township, in the northeastern part of the county, Arthur & Simpson are drilling a test on the Mary Rocho farm, and Abbott Brothers are nearing sand with a test on the Harrison Goddard farm, same vicinity.

In Sandusky County, Washington Township, W. C. Richards has a 6-bbl. pumper at No. 12 well, 1,000 feet from the north line and 1,100 feet from the east line of the Mary A. Hetrick farm, in the northwest quarter of Section 13, and is now drilling No. 13, same farm. Frank Haubert and others are drilling No. 3 on the Fanny Havens farm, Section 17, Jackson Township.

In Center Township, Mercer County, William B. Lawrence and others' No. 5 well, 1,700 feet from the south line and 360 feet from the west line of the Dayton Fast farm, in the northwest quarter of Section 9, and on the map as the J. Harner farm, showed an initial of 15 bbls. the first 24 hours. Sand was found at 1,127 feet and drilled 50 feet in the sand. Gailey Myers is drilling No. 5 on the Joseph G. Wenning farm, Section 31, Butler Township.

Tiffin Field

In the Tiffin Field, in Clinton Township, Seneca County, Geiger & Shaul struck a duster at a test 200 feet from the north line and 600 feet from the east line of the Charles Paul farm, in the northeast quarter of Section 8. Sand was topped at 1,488 feet and sent to a depth of 205 feet in the sand, no oil being encountered at a total depth of 1,693 feet. The wildcat drilled by the Stipio Oil Co., 600 feet from the south line and 200 feet from the west line of the J. W. Allen farm, in the northeast quarter of Section 20, Stipio Township, same county, also developed into a duster. The sand was struck at 1,839 feet and went 305 feet in the sand to a total depth of 2,144 feet.

In Ottawa County, Danbury Township, east of Port Clinton, the test by the Ohio Oil Co., in the southwest corner of the Fred Block farm, in the southwest quarter of Section 4, struck top of Trenton at 1,987 feet and after going 103 feet in the sand to a total depth of 2,090 feet, it was abandoned as dry. In Catawba Township, also in the territory east of Port Clinton, the Catawba Oil & Gas Co. is drilling a test on the C. B. Hadden farm, Section 6.

In the Roundhead Field of Hardin County, in McDonel Township, H. E. Schmidt's No. 8 well, 700 feet from the north line and 1,100 feet from the west line of the Earl Hites farm, showed an initial of 15 bbls., with sand topped at 1,452 feet and sent 50 feet in the sand. The Roundhead Oil & Gas Co.'s No. 3 on the Mary M. Austine No. 2 farm, same area, is a 30-bbl. initial pumper. No. 4, same farm, is drilling.

In Mississinewa Township, Darke County, the Cole Oil & Gas Co. is drilling No. 18 on the W. C. Disher farm, Section 2.

Abandoned Wells

Abandoned wells in Wood County are: In Montgomery Township, Winchell Oil Co.'s No. 1 A. Deter farm, Section 8; E. L. Korner's Nos. 1 and 3 H. A. Morgan, same section. In Liberty Township, Hoffman & Haas abandoned Nos. 1, 3, 6 and 8 H. S. Kiger farm, Section 22; Ohio Oil Co.'s No. 1 W. H. Allen lot, Section 13, and Nos. 1 and 3 on the Carlo Call farm, Section 22; in Ross Township, same company's No. 10 G. Eckerman farm, Section 36; in Troy Township, Zeising & Zeising, Nos. 1, 2 and 3 John W. Zeising farm, Section 12; Ohio Oil Co.'s No. 1 Andrew Radeloff farm, Section 24; and in Lake Township, Bushman & Sherwood's No. 1 Dora Aubry farm, Section 27.

In Bath Township, Allen County, Frederick Roeder, Jr., pulled Nos. 1, 2 and 3 on the John W. Bressler farm, Section 26.

In Auglaize County, Logan Township, Wesley Sprague and others pulled Nos. 1, 2, 4 and 5 L. V. Bowersock farm, Section 5, and No. 1 William Gochenour farm, same section, while W. B. Jack and others abandoned Nos. 1 and 2 on the Eliza Fisher farm, Section 30.

Sandusky County

In Sandusky County, Sandusky Township, the Ohio Oil Co. abandoned No. 3 John Bender farm, Section 8. The North Lima Oil Co. pulled Nos. 1 and 2 Frank Widman farm and Nos. 3 and 4 John Bender farm, both in Section 8. The same company pulled No. 5 on the Jacob A. Gabel farm, Section 3, Jackson Township. In Madison Township, the Home Banking Co. pulled No. 2 Frank Myers farm, Section 18, and No. 1 Isaac Myers farm, Section 10. Frank W. Null pulled No. 7 S. P. Hathaway farm, Section 32, and the Ohio Oil Co. did the same with No. 8 on the F. Faulkner farm, Section 7. In Scott Township the Sun Savings Bank & Rearick abandoned No. 5 Eli Kane farm, Section 30. Patton & Patton did the same with No. 25 E. F. Day and others' farm, Section 31. Sherman & Hays pulled No. 10 Emmer Benton farm, Section 17. The Ohio Oil Co. did the same with No. 8 on the Timmins Illel farm, and Nos. 9 and 10 on the Z. Houtz farm, Section 4. In Washington Township, the Van Vleck-Stowe Oil Co. abandoned No. 4 Orville Posey farm, Scetion 29. W. H. Rearick pulled Nos. 4 and 6 George Lang farm, Section 18, and the Ohio Oil Co. its No. 2 on the M. Esker farm, Section 20. In Woodville Township, H. J. Neiset and others abandoned Nos. 3 and 4 Fred Taulker farm, Section 7, and G. H. Blausey did the same

(Continued on Page 97)

TRI-COUNTY FIELD IN KENTUCKY SHOWS REMARKABLE DEVELOPMENT

By Whit

BOWLING GREEN, Ky., Oct. 1.—As is usual the Ambrose Pool, in Ohio County, is leading Kentucky in wells above the average, with two new ones ranging around 250 bbls. each at a depth of about 700 feet, which makes this wonder area the talk of operators and has caused the arrival of a large number of outsiders who are looking over the territory with a view of getting some of the good things that are passing around. Where this nice pool will end remains to be seen, but the end to the northeast has about been found, and the west, southwest and south is looking the more inviting. To the west the larger producers have been found. The western division is now far in the lead in development work and, if this is kept up, the production will become larger than in the eastern division. In the eastern division, the Petroleum Exploration Co.'s No. 1 on the Brewer farm, in the Island Creek area of Owsley County, is stated to be a 160-bbl. producer while the Big Injun Oil Co.'s last well did not live up to its showing when first drilled in.

Tri-County Field

The Tri-County Field, comprising Hancock, Ohio and Daviess Counties, has come to the front in an amazing manner in production, especially Ohio County. The State Tax Commission of Kentucky gives comparative figures of the three counties for August, 1926 and 1927, which will show the big gain in a year's time. The figures are:

Oil Production, August, 1926

County—	Bbls. Production	Value
Ohio	37,960.67	$ 83,789.19
Daviess	1,497.81	3,270.10
Hancock	2,245.37	4,918.57
Total	41,703.85	$ 91,977.86

Oil Production, August, 1927

County—	Bbls. Production	Value
Ohio	137,532.71	$182,679.14
Daviess	5,427.62	7,218.74
Hancock	1,928.99	2,565.55
Total	144,709.32	$192,463.43

The above figures show that during August, 1927, the production was 103,005.47 bbls. more than for August, 1926. Valuation of the oil was also $100,485.57 greater than in 1926. Had the price of crude been during August, 1927 as high as in the same month of 1926, the money value would, of course, be much higher.

Week's Work

A summary of the week's work in the Kentucky Field shows 29 completions, 19 producers with an initial production of 768 bbls., 8 dry holes and 2 gas wells. Compared with the previous week, there were 1 more completion, 2 more producers, 383 bbls. less production, 2 less dry holes and 1 more gas well. The wells were distributed by counties and districts as follows:

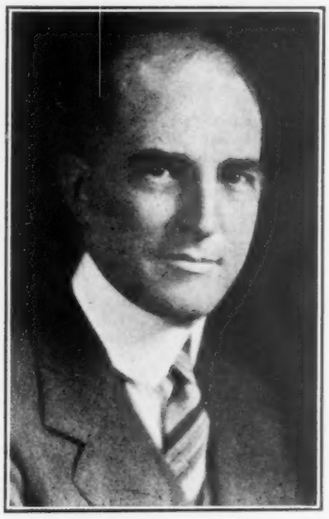
County—	Comp.	Oil Wells	Prod	Dry	Gas
Ohio	8	6	540	1	1
Barren	9	4	37	5	0
Estill	5	3	5	2	0
Owsley	1	1	160	0	0
Butler	1	1	10	0	0
Lee	1	1	5	0	0
Johnson-Magoffin	1	1	5	0	0
Warren	1	1	4	0	0
Morgan	1	1	2	0	0
Floyd-Knott	1	0	0	0	1
Total	29	19	768	8	2
Last week	28	17	1,161	10	1
Difference	1	2	393	2	1

Eastern Division

Outside of the Petroleum Exploration Co.'s No. 1 on the J. R. Brewer farm, in the Island Creek district of Owsley County, there was little in the way of good producers. This well is in an area where the 50 acres of the same farm to the south of the Petroleum Co.'s well showed two good producers and No. 3 is showing very light, but that can be expected in many parts of Kentucky and comes as no surprise to the trade. Work is not being rushed by any means in this area on account of the great expense of moving material and drilling outfits, being something like 18 miles from Beattyville, and with the present price of crude, many of the leaseholders will await a better market. Now seems to be a good time at least to test the surroundings so that when conditions are

(Continued on Page 102)

MEN KNOWN IN OILDOM



Edwin M. Lyons

Edwin M. Lyons, president of the Tiona Refining Company, Philadelphia, Pa., was honored last month by being elected president of the National Petroleum Association on the occasion of its Twenty-Fifth Anniversary Convention held in Atlantic City, N. J. The selection of Mr. Lyons to head the activities of the oil industry's oldest association was a mark of appreciation by associates for his many years of activity in promoting the interest of the eastern oil refiner. Mr. Lyons has been an active member of the association for a period of 21 years.

Mr. Lyons entered the oil business with the Tiona company 21 years ago. His first position was that of office manager. He was later made an executive of the company his work being primarily connected with the sales division of the company's activities. From 1902 to 1912 he was also connected with the Wellsville Refining Company and the Union Petroleum Company.

For many years Mr. Lyons has taken an active interest in all co-operative and associational work of interest to the eastern oil industry. He is president of the National Petroleum Mutual Fire Insurance Company, and also recording secretary of the Pennsylvania Grade Crude Oil Association.

Mr. Lyons' headquarters are located in the Widener Building, Philadelphia, Pa.

PERSONAL PARAGRAPHS

Grover Crosbie, of Petrolia, Ontario, is home on three months' furlough from the Colombia fields.

* * *

Charles Markey, after nine years of drilling in Balikpapan, Burmah, has returned to Los Angeles, Calif.

* * *

L. K. Coughlan, California driller, has returned after a three years' stay with the Royal Dutch-Shell Company.

* * *

C. D. Keen, of the firm of Keen & Woolf, Shreveport, La., has returned from a vacation spent in Colorado.

* * *

W. E. Ramsey, oil operator of Oklahoma City, Okla., is leaving for a 10 days' business trip to California.

* * *

J. E. Swindler, vice president of the Frick-Reid Supply Company, Tulsa, Okla., has been spending the past few days in Oil City, Pa., at the plant of the Reid Gas Engine Company. Mr. Swindler made the trip by automobile and was accompanied by Mrs. Swindler and their son, Reid.

John Moorehouse, Houston, Tex., and with the Texas Railroad Commission, has been transferred to Fort Stockton in Pecos County.

* * *

Ross M. Stuntz, superintendent of production, natural gas division, Empire Gas & Fuel Company, is on a business trip to Amarillo, Tex.

* * *

James N. Dunleavy, of the Skelly Oil Company's production department in El Dorado, Ark., spent a part of his vacation at Tulsa, Okla.

* * *

L. G. Ensign, assistant manager of the Trinidad Lake Asphalt Company, Trinidad, British West Indies, is visiting relatives in California.

* * *

Finley Scruggs, chief scout for the Humble Oil & Refining Company, Houston, Tex., has returned from a trip through the West Texas area.

* * *

John Reid, vice president of the Joseph Reid Gas Engine Company, of Oil City, Pa., has left for a business trip through Texas and Oklahoma.

* * *

Lloyd R. Guerra, traffic superintendent of the Pan American Western Petroleum Company, is away from his Los Angeles office on his honeymoon.

* * *

Rex Dawson, assistant chief scout of the Carter Oil Company, has returned to his desk after a two weeks' vacation spent in southern Oklahoma.

* * *

F. Ray McGrew, of Shreveport, La., president of the Standard Pipe Line Company, has been away from his office on a vacation in southern Texas.

* * *

D. J. Stevenson, of the Vacuum Oil Company's Houston, Tex., land office, was absent from his office several days due to the death of his mother.

* * *

Bradford Hearn, secretary-treasurer of the Shreveport Producing & Refining Corporation, Shreveport, La., has returned from a vacation spent in Arkansas.

* * *

Carl Westcott, of Tulsa, Okla., of the firm of Westcott & Greis, Inc., spent several days at Shreveport, La., and oil fields around there the past week.

* * *

R. D. Parker, Texas Railroad Commission engineer, was in Galveston, Tex., several days checking figures in connection with a change of gas rates in Galveston.

* * *

Joseph Jensen, chief petroleum engineer of the Associated Oil Company, has moved bag and baggage from Los Angeles to the company's main office in San Francisco.

* * *

O. H. Eichelberger, manager of the Vacuum Oil Company's field operations at Lockport, La., has returned to his duties following a trip to Tulsa, Okla., and Houston, Tex.

* * *

James Brooks, of Wyoming, Ontario, who has been home on furlough from the Borneo fields, left for the Far East the last week of September accompanied by his bride.

* * *

A. J. Turner, who addressed the last meeting of the California Natural Gasoline Association in Los Angeles, has returned to the San Francisco office of the Standard Oil Company.

* * *

L. H. Badger, of Tulsa, Okla., representative of the Southwestern Engineering Corporation, was a business visitor in Shreveport and other North Louisiana points the past week.

* * *

Ray W. Richmond, division superintendent of the Humble Oil & Refining Company, Corsicana, Tex., division, has resigned, effective October 1, to enter the contract drilling business.

* * *

E. W. Clark, executive vice president of the Union Oil Company and president of the American Petroleum Institute, is in the East and is not expected to return to Los Angeles before November.

* * *

The many friends of W. J. Murray, assistant manager of fuel oil and asphalt sales of the Union Oil Company of California, will be glad to learn that he is back in his office again after an absence of two months due to illness.

G. J. Megenheimer, an independent oil producer of Los Angeles, Calif., has been making a tour of the Seminole territory.

* * *

R. T. Baker, of Houston, Tex., chief geologist for The Texas Company, visited Shreveport, La., offices of the company for a short time.

* * *

E. T. Williams, well-known operator, was through Houston, Tex., last week en route to the West Texas fields where he intends to operate. Mr. Williams was in Houston following a trip in Louisiana.

* * *

J. B. Hill, Jr., of the Atlantic Refining Company, was elected chairman of the Petroleum Division of the American Chemical Society; Prof. Fred W. Padgett, University of Oklahoma, vice chairman; Carl Johnson, Manhattan Oil Company, secretary.

* * *

C. P. Still, of the geological department of the Prairie Oil & Gas Company, who has been working in East Texas, was in San Antonio last week. He was formerly with the geological department of the Marland Oil Company in San Antonio.

* * *

C. D. Crites, Jr., who is a member of the Richfield Oil Company of Los Angeles, Calif., land department, has been making a tour of the Mid-Continent fields especially the Seminole area. Mr. Crites was formerly an executive of the old Indiahoma Refining Company.

* * *

A. Clark Bedford, son of the late A. C. Bedford, formerly chairman of the board of the Standard Oil Company of New Jersey, was elected a vice president of the Standard Oil Company of Louisiana by the board of directors.

* * *

John H. Nelson, of the minerals section of the Bureau of Foreign and Domestic Commerce, Department of Commerce, of Washington, D. C., was in Tulsa, Okla., during the past week on business connected with his department.

* * *

John Fertig, vice president and general manager of the Producers & Refiners Corporation of Denver, Colo.; R. E. Wertz, vice president and general superintendent of the same company, Parco, Wyo., and P. C. Spencer, general attorney for the company at Cheyenne, Wyo., were Tulsa, Okla., visitors.

* * *

S. F. Bedoya, secretary of the Embassy of Peru at Washington, D. C., accompanied by Mrs. Bedoya, represented his Government at the International Petroleum Exposition and was shown through the exhibition by Walter Miller, vice president of the Marland Refining Company, and the officers of the day.

* * *

Herman Stabler, chief of the conservation branch, United States Geological Survey, and C. E. Dobbin, assistant chief of the section, geology of fuels, spent part of August and September visiting the oil and gas fields in the Rocky Mountain region and inspecting survey field parties working in Montana and Utah.

* * *

J. D. Manley, of the American Mineral Spirits Company, Chicago, Ill., visited Wichita Falls, Tex., last week on business and while there was entertained at Lake Kemp on a fishing trip by James H. White, oil producer, W. C. Duncan, of the Plains Gas & Fuel Company, Inc., and W. B. Richardson, of the Cities Service Company.

* * *

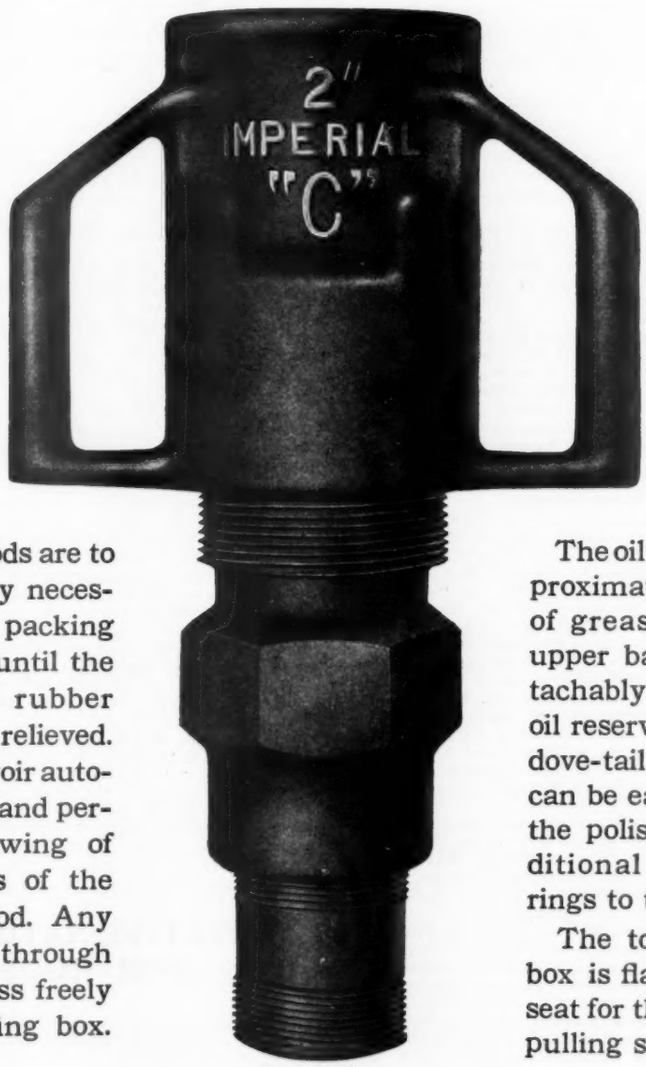
O. E. Stimpson, of Shreveport, La., superintendent of the Texas Pipe Line Company in Arkansas and North Louisiana; J. L. Shea, assistant superintendent of The Texas Company at Shreveport, La.; E. L. Hawkins, of the auditing department, and J. A. Gourrier, superintendent in the Pine Island Field, have returned from a visit to Chicago.

* * *

Forrest M. Towl, New York, president of the Southern Group of Pipe Lines, was in conference with officials of the Eureka Pipe Line Company, the National Transit Company, the Buckeye Pipe Line Company, the Pure Oil Pipe Line Company, and the Southwest Pennsylvania Pipe Line Company, at the offices in the Southwest Pipe Line Company, in Pittsburgh, Pa.

"OILWELL"
IMPERIAL STUFFING BOX
MODEL "C"

The Model "C" Stuffing Box is designed to permit pulling sucker rods and valves (as well as running a sucker rod socket) directly through the box without removing the stuffing box from the tubing. This feature eliminates the use of the sucker rod guide or bell nipple.



When sucker rods are to be pulled, it is only necessary to turn the packing head to the left until the tension on the rubber packing rings is relieved. Then the oil reservoir automatically unlocks and permits the withdrawing of the packing parts of the box on the polish rod. Any tool that will pass through the tubing will pass freely through the stuffing box.

The oil reservoir holds approximately one-half pint of grease or oil, and the upper babbitt gland is detachably connected to the oil reservoir by means of a dove-tail arrangement and can be easily moved up on the polish rod to add additional rubber packing rings to the box.

The top of the stuffing box is flat, offering a solid seat for the elevators when pulling sucker rods.

Patent Pending

Inquire at Any of Our 100 Branches

OIL WELL SUPPLY CO.

NEW YORK—LOS ANGELES—PITTSBURGH, U.S.A.—SAN FRANCISCO—TAMPICO—LONDON

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

Natural Gas Developments

Material Increase In Domestic Uses Of Natural Gas

The comparatively slow but steady growth of the natural gas industry in the United States was continued in 1926, when 1,313,019,000,000 feet of gas was produced and delivered to consumers, an increase over 1925 of 10 per cent, according to the United States Bureau of Mines, Department of Commerce. Of this amount 166,000,000 feet was piped to Mexico and Canada, leaving 1,312,853,000,000 feet as the total internal consumption in 1926. The value of the gas per thousand feet at the wells and at points of consumption showed increases over 1925, the former rising from 9.4 to 9.5 cents, the latter from 22.3 to 22.8 cents. In neither case, however, was the price of 1923 and some previous years attained.

Domestic household consumers used 22 per cent of the total consumption of natural gas in 1926, leaving 78 per cent for industrial consumption. This indicates a slight growth on the part of the latter in 1926. The total return, however, from domestic consumption was greater, since domestic users paid an average of 58.1 cents per thousand feet, compared with 12.8 cents for industrial concerns. In 1926 there were 3,731,000 domestic consumers of natural gas as compared with 3,508,000 in 1925. This represents a gain of 223,000, which is, with the exception of 1913 and 1922, the largest yearly increase ever recorded. California and Texas each recorded an increase of about 70,000 in number of domestic consumers and far surpassed the other states in this respect.

The relative rank of the three chief gas-producing states was unchanged in 1926. Oklahoma, which ranks first, recorded a 15 per cent gain in output; California, which ranks second, a 9 per cent gain; but production in West Virginia, the next ranking state, showed a slight decrease. Texas registered a material gain in output and not only took fourth place from Louisiana but threatens to displace West Virginia in the near future.

The total consumption of natural gas (including residue gas from natural-gas gasoline plants) by industrial users in 1926 amounted to 1,023,678,000,000 feet, an increase over 1925 of 12 per cent. The consumption of natural gas for field and industrial uses, exclusive of carbon black, again showed an increase.

The interstate movement of natural gas in 1926 amounted to 209,527,000,000 feet, a slight increase over the previous year. The movement from West Virginia to Ohio and Pennsylvania continued to be of first importance. Of more than passing interest was the increase in the counter movement of gas from Ohio to West Virginia.

CANADIAN WESTERN EARNINGS

CHATHAM, Ontario, Oct. 1.—It is estimated that the sales of the Canadian Western Natural Gas, Light, Heat & Power Co. in Calgary for the current year will run between 3,500,000,000 and 3,750,000,000 feet of natural gas, in addition to its sales to a number of smaller communities on the pipe line. A record covering the 12 months ended June 30, 1927, shows an increase of 35.4 per cent in gross revenue over the previous year, while net earnings increased over 37 per cent. Net income, after depreciation, depletion and interest charges were deducted, showed a gain of 92 per cent. The customers have increased from 10,000 in 1923 to 15,000.

PLANS COMPLETED FOR CONVENTION OF AMERICAN GAS ASSOCIATION

Plans have been completed for the ninth annual convention and exhibition of the American Gas Association, the first since the amalgamation with the Natural Gas Association of America, to be held at the Stevens, Chicago, October 10 to 14. The program includes a special executive conference of the natural gas department.

The convention will be opened by President A. B. MacBeth, Southern California Gas Co., Los Angeles, who will deliver an address on "The Industry's Program."

Ralph Gallagher, East Ohio Gas Co., Cleveland, Ohio, chairman, laboratory managing committee, will speak on "The Laboratory—Today and Tomorrow."

At the meeting of the commercial section, Tuesday afternoon, October 11, a paper will be read on "What's Ahead in Domestic Cooking?" by George E. Whitwell, Equitable Gas Co., Pittsburgh, Pa., chairman, domestic cooking committee.

The Thursday afternoon session of the commercial section will be opened by A. Hurlburt, vice president, Equitable Gas Co., Pittsburgh, Pa., with an address on "The Commercial Value of the Testing Laboratory."

The industrial gas section on Wednesday afternoon will consider the report of the sales methods committee by K. Emmerling, East Ohio Gas Co., Cleveland, Ohio, chairman.

The manufacturers section will hear a paper on "Laboratory Developments" by R. M. Conner, director of the A. G. A. Testing Laboratory, Cleveland, Ohio, on Monday afternoon.

The technical section's session will open Tuesday afternoon when the following papers and reports will be read:

"Tests on Effect of Thermal Content, Specific Gravity, Etc., on the Utilization of Various Gases and Mixtures Thereof," by G. B. Shawn, A. G. A. Testing Laboratory, Cleveland, Ohio.

"Mixed Gas From the Standpoint of Plant Operation," by J. A. Perry, United Gas Improvement Co., Philadelphia, Pa.

Subcommittee report on Adjusting Present or Possible Future Production Methods to Plant Load Characteristics, by L. J. Willien, chairman, Byllesby Engineering & Management Corp., Chicago, Ill.

Subcommittee report on Cost and Method of Providing for a Gas House Heating Load Equal to Present Maximum Send-out on Distribution Systems, by M. I. Mix, chairman, Peoples Gas, Light & Coke Co., Chicago, Ill.

Subcommittee report on Problem B—Economics of Supplying Outlying Sections of a Distribution System, by O. S. Hagerman, chairman, American Light and Traction Co., New York, N. Y.

Subcommittee report on Problem C—Economics of Long-Distance High-Pressure Transmission of Gas, by F. A. Lydecker, chairman, Public Service Electric & Gas Co., Newark, N. J. (Contribution of distribution committee.)

On Wednesday afternoon, the program includes:

Subcommittee report on New Processes—Directly or Indirectly Concerned With the Production of Gas, by A. C. Fieldner, chairman, Bureau of Mines, Washington, D. C. (Contribution of chemical committee.)

"Developments in Water Gas Operation," by L. J. Willien, Byllesby Engineering & Management Corp., Chicago, Ill., and Louis Stein, Northern States Power Co., Minneapolis, Minn.

The chemical parallel sessions will open Wednesday afternoon with the following program:

"Constitution of Coal in Relation to Spontaneous Combustion," by Dr. W. Francis, British Safety in Mines Research Board, Sheffield, England.

(Continued on Page 105)

COTTON VALLEY FIELD AND CARTERVILLE LINES

SHREVEPORT, La., Oct. 1. — Reserve Natural Gas Co. has started construction of 18 miles of 10-inch gas line to link the Carterville Field of northern Bossier Parish and the Cotton Valley Field of Webster Parish with the company's main line connecting the Sarepta Field of Webster Parish with the Waskom Field of western Caddo Parish.

The line from the Cotton Valley Field and the one from the Carterville Field will meet at a common junction with the main Sarepta line at a point 4 miles south of Carterville to be known as the Carterville station. At that point a booster station will be built. The station is not necessary at present for the Carterville and Cotton Valley gas which has sufficient well pressure to handle it, but it will be required for gas from the Sarepta and Shongaloo Fields.

The new feeder lines are being laid for the Dixie Pipe Line Co. and the Dixie Gas & Utilities Co., the Moody-Seagraves interests, which own a half interest in the Reserve Natural Gas Co. The Reserve company will operate the lines as a part of its system to transport the Dixie's Carterville and Cotton Valley gas to Waskom, where it will be delivered to the Dixie Pipe Line Co., which now is laying a 22-inch line from Waskom to Houston and Port Arthur, Tex.

For the latter project, 300 cars of pipe are en route to Shreveport and Waskom, Tex., and work of laying the line will begin at once. The Hope Engineering & Supply Co., which will lay the line, is moving in its crews and will have six gangs at work from now on. Construction already has begun on the Waskom booster station, which will include 26 units of 185-horsepower three-cylinder vertical engines.

Construction of the line will be centralized at the northern end for the time being so that northeastern cities granting franchises for gas to the Dixie Gas & Utilities Co. will be able to have fuel before cold weather. The line then will be laid on to Livingston, Houston and Port Arthur.

HOUSTON GULF GAS AND SOUTHERN MERGE

NEW YORK, Oct. 1.—A merger of the Southern Gas Co., the Houston Gas & Fuel Co. and the Houston Gulf Gas Co. into the Houston Gas Securities Co. has been announced by E. L. Phillips, chairman of the United Gas & Electric Corp. Until recently United Gas controlled Houston Gas & Fuel. Houston Gas Securities was formed for the purposes of the merger and will be affiliated with United Gas.

This merger, together with the acquisition from William F. Morgan, the largest independent producer in southern Texas, of his properties and production in Webb and Jim Hogg Counties, will give Houston Gas Securities control of natural gas properties which are among the largest in that part of the country. Houston Gas Securities has also purchased Mr. Morgan's interests in a contract to supply the Valley Gas Co., which furnishes natural gas to Brownsville and other points. It also has contracted to supply the Peoples Texas Utilities Co., which owns the distribution system in Austin, and it will construct a pipe line from San Antonio to Austin, which will supply New Braunfels, Segiene and St. Marcos.

Houston Gas Securities will acquire the Southern Gas Co. by purchasing 80 per cent of its stock outstanding on September 1 at $62.50 a share. Holders of the remaining 20 per cent may obtain the same price.

DIXIE GAS PURCHASES BEAUMONT GAS COMPANY

The Dixie Gas & Utilities Co. has purchased the Beaumont Gas Co. of Beaumont, Tex. The Beaumont company furnishes natural gas for domestic and industrial consumption in the city of Beaumont, Tex. The purchase of this property by the Dixie Gas & Utilities Co. marks another step in the policy of that company to acquire by purchase or to construct distributing systems to supply natural gas to domestic and industrial consumers in a number of cities and towns in eastern Texas.

The Dixie Gas & Utilities Co., through its subsidiaries, will enter into a long term contract to purchase a large part of its natural gas requirements at wholesale from the Dixie Gulf Gas Co. Both the Dixie Gas & Utilities Co. and the Dixie Gulf Gas Co. are controlled by the Moody-Seagraves interests.

TENTATIVE NATURAL GAS PROGRAM FOR HOUSTON MEETING, OCT. 31

The tentative program of the southwest division meeting of the Natural Gas Division of the American Gas Association, to be held at Houston, Tex., October 31 and November 1, includes the following papers:

Standardizing the open flow from natural gas wells.—T. W. Johnson, assistant natural gas engineer, United States Bureau of Mines, Bartlesville, Okla.

The value of property appearance and maintenance.—R. J. Daugherty, Empire Companies, Bartlesville, Okla.

Natural gas problems of the Southwest.—Frank Kirk, Houston Pipe Line Co., Houston, Tex.

Development of conservation of natural gas.—William F. Chisholm, director of mineral division, Louisiana Conservation Commission.

Institutional advertising.—Keith Clevenger, Empire Companies, Bartlesville, Okla.

House heating with gas.

The question discussions will include:

What are the advantages and disadvantages of curb box meters?

What are the advantages and disadvantages of the several methods of protecting gas service lines?

What results have been obtained in protecting steel pipe lines from soil corrosion?

What is being done to further the sale of gas engine gas?

What would be the advantages of making industrial installations on an installment payment plan?

What is the best way to control high pressure gas wells?

Can an upper gas sand be mudded off and later reclaimed as a producing gas sand?

What are the advantages of straightening valves in orifice meter settings?

Subscriptions having been received in excess of the entire issue, this advertisement appears as a matter of record only.

NEW ISSUE

$2,250,000
Southern Gas Utilities, Inc.

First Mortgage 6½% Sinking Fund Gold Bonds, Series A

Dated September 1, 1927 **Due September 1, 1939**

Interest payable March 1st and September 1st at The First National Bank of Kansas City, Guaranty Trust Company of New York, and at Continental and Commercial National Bank, Chicago. Coupon bonds in denominations of $1,000 and $500, registerable as to principal. Redeemable on any interest date at 105 and accrued interest to August 31, 1929; thereafter ½% less each year to maturity. Interest payable without deduction for any normal Federal Income Tax not exceeding 2% per annum. Reimbursement of certain state taxes to holders upon proper and timely application, as provided in the mortgage.

SINKING FUND ESTIMATED TO BE SUFFICIENT TO RETIRE THIS ENTIRE ISSUE BY MATURITY

These Bonds will be guaranteed as to principal and interest by Southern Gas Company, such guaranty being subject only to the outstanding first mortgage and debenture bonds of said company.

Stock Purchase Warrants	**A detachable warrant with each $1,000 Bond (other denominations in proportion) will entitle the holder thereof to purchase five shares of the Company's Common Stock, without par value, up to and including September 1, 1930, at $12.50 per share; thereafter to and including September 1, 1933, at $17.50 per share; and thereafter to and including September 1, 1937, at $25.00 per share, irrespective of previous redemption of the Bonds.**

THE FIRST NATIONAL BANK OF KANSAS CITY, Trustee

Mr. L. J. Snyder, President of the Company, summarizes his letter of September 16, 1927, to us as follows:

BUSINESS: Southern Gas Utilities, Inc., organized under the laws of Delaware, will own, upon completion of this financing and certain construction for which funds will be deposited, the present gas production and future gas rights on approximately 55,000 acres of gas lands in Webb, Duval, Zapata, Jim Hogg, Bexar and Medina counties, Texas, together with approximately 80 miles of main trunk lines, field gathering lines and appurtenances thereto, forming a complete and unified system for the production and transmission of natural gas and will then also own and operate the gas distribution systems in New Braunfels, Seguin, Hondo and D'Hanis and the transmission lines supplying these towns.

The gas production which the company is acquiring, now serves Southern Gas Company and constitutes the principal source of supply for San Antonio and for Rio Grande Valley Gas Company which will furnish gas to thirteen cities and towns and large industrial consumers in the lower Rio Grande Valley. The total present population to be served by the Company, directly or indirectly, is estimated in excess of 350,000.

GAS SUPPLY: In the opinion of independent geologists, the Company will own or control producing gas wells or gas rights in such wells having an aggregate open flow capacity in excess of two billion cubic feet daily, the reserves constituting an adequate supply at the expected rate of withdrawals, well beyond the life of these Bonds.

EARNINGS: The following estimate of earnings has been made by independent engineers after a detailed survey of domestic and industrial demand available in the communities to be served:

	1928	1930	1932
Gross Earnings	**$939,800**	**$1,171,100**	**$1,310,700**
Operating Expenses, including Royalties	**399,580**	**499,000**	**507,950**
Net Earnings Available for Interest	**$540,220**	**$ 672,100**	**$ 802,750**
Maximum Annual Interest Requirements on this issue of $2,250,000 Bonds	**$146,250**		

Net earnings, as shown above, for the years 1928, 1930 and 1932 are equivalent to over 3.6, 4.5 and 5.4 times, respectively, maximum annual interest requirements on this issue of Bonds.

SECURITY: These Bonds will be secured, in the opinion of counsel, by a first mortgage, which will also provide for the issue of additional Bonds, on all of the fixed physical property of the Company, including (on the completion of certain construction, funds for which will be deposited) about 80 miles of main trunk lines, distribution systems, gathering lines, etc., and by the pledge or mortgage of gas production, wells, sales contracts, leases and agreements, representing an actual cost substantially in excess of this Bond Issue. These Bonds will be followed by $305,000 Purchase Money Notes, 5,750 shares of $7 Preferred Stock without par value and 88,750 shares of Common Stock without par value.

PURPOSE OF ISSUE: The proceeds from these Bonds are to be used in part for the acquisition of properties, extension of pipe lines, for working capital and for other corporate purposes.

These Bonds are offered when, as and if issued and received by us, subject to approval of counsel. All legal proceedings in connection with this issue will be passed upon for the Bankers by Messrs. Chapman & Cutler, Chicago, and for the Company by Messrs. Kennon and Kennon, San Antonio, Texas. Engineering and geological reports by Mr. James O. Lewis, Tulsa, Okla. It is expected that temporary bonds of the Company will be ready for delivery on or about October 1, 1927.

Price 99 and Accrued Interest to Yield Over 6.60%

The above issue was offered on September 22, 1927, by ourselves and associates.

G. E. Barrett & Co.

Incorporated

120 Broadway **New York**

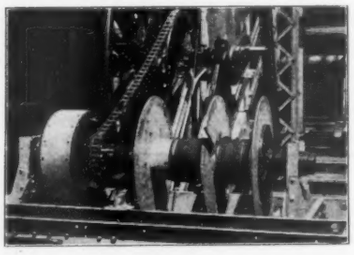
The information contained in this advertisement has been taken from sources believed to be reliable and, while not guaranteed, has been accepted by us in the purchase of these securities for our own account.

EQUIPMENT AND SUPPLIES

SIMPLICITY KEYNOTE IN NEW SAND REEL

A new chain driven sand reel is announced by the International Derrick & Equipment Co. This reel, a very compact unit, is said to incorporate a number of distinctive features which give greater economy of operation, eliminate breakdowns, permit higher operating speeds and make the reel universally adaptable to all makes of equipment.

The simplicity of design and the minimum number of parts can be noted in the accompanying illustration. Adjustments are described as simple, easy to make and foolproof.



The Ideco chain driven sand reel is reported to be capable of lowering a 6-inch bailer into the hole at a rate of 3,000 feet per minute and will lift the bailer as rapidly as the speed of the engine will permit. Vibration has been eliminated, due to the equalization and balancing of parts. The reel, the manufacturers say, is capable of raising the bailer from any depth and free it if stuck in the mud in the bottom of the well, yet the clutch is flexible enough to give without damage to the machinery should the bailer strike some object or become frozen in the hole. Braking is particularly efficient and positive.

The Ideco chain driven sand reel is intended to be moved from rig to rig as a unit. It can be installed upon the derrick floor, if desired.

NEW SYSTEM PROPOSED FOR AIR OR GAS LIFT

A system briefly described by the inventor differs from the air lifts or gas lifts used at the present time, where the fluid enters the tubing under pressure, is aerated and forced out of the tubing by the expansion of the bubbles.

This system is intermittent and one cycle is as follows: The fluid chamber fills at atmospheric pressure, or under vacuum; the chamber is closed and the fluid forced out of the well ahead of the gas. The gas in the fluid chamber returns to atmospheric pressure and the chamber opens and refills.

Valve No. 1 is placed at the bottom of the tubing and so constructed that the air in the bellows of the valve is compressed as the fluid rises in the tubing. The spring in the valve is set so as to close the fluid port when the desired amount of fluid has entered the tubing.

With this fluid control valve, it is possible, it is said, to pump all well regardless of depth or fluid level with the same pressure, as the resistance caused by the height of the column of fluid in each case would be the same, the specific gravity of the fluid being taken into consideration in setting the valve. The volume of gas used depends on the depth of the well and the number of barrels of fluid pumped. The ball and seat placed above the control valve is to close the chamber in case the gas is turned in before the fluid has reached sufficient height in the tubing to close the control valve.

Valve No. 2 is an efficiency valve placed above the fluid chamber and is designed to open at working pressure, allowing the gas to pass into the fluid chamber, forcing the fluid out of the well and closing at slightly less than working pressure, when the gas is turned off on top of the ground. This valve traps the gas between the tubing and macaroni and saves about half the volume of the gas.

Wells with different fluid levels are taken care of by different sized fluid chambers and macaroni. A well with a low fluid level would require a fluid chamber of large diameter with small macaroni. The ratio between the volume of gas required to pump a given number of barrels is the same for the different sizes of macaroni.

The volume of gas required for each cycle is equal to the volume of the fluid chamber plus the volume of the macaroni, less about two-thirds of the fluid column being lifted as the expansion of the compressed gas completes a cycle after the gas has been shut off.

The control on top of the ground is electrical. There is one motor-driven

(Continued on Page 168)

GLASS PUMP BOWLS FOR DISCOLORATION

Announcement has been made by Gilbert & Barker Manufacturing Co. of Springfield, Mass., of a new glass cylinder trade-marked "Nultra," for bowls of visible gasoline pumps.

This new cylinder, it is stated, has been developed to overcome the discolored gasoline handicap, and is the result of months of co-operative effort on the part of the Gilbert & Barker Manufacturing Co. and one of the largest glass companies. It is made of a special kind of glass, which, it is asserted, prevents the discoloration of gasoline by sunlight. This glass is said to possess certain paractinic qualities for cutting out the chemically active light rays that turn cracked gasoline yellow and cause it to lose its original water-white purity.

It is asserted that this "Nultra" visible pump cylinder, besides eliminating the yellowing of cracked gasoline, also shows up considerably the fading out tendency of colored gasolines and brings out the natural sparkle of any gasoline.

HOPE ENGINEERING CO. AWARDED CONTRACT

The Hope Engineering & Supply Co. of Mt. Vernon, Ohio, was recently awarded the contract for the construction of one of the largest pipe lines in its history. The line is to be laid for the Dixie Pipe Line Co. and will extend from the Waskom Field in Eastern Texas to Livingston from which point trunk lines will lead to Houston and Port Arthur. The line will be the largest pipe line in the State of Texas.

The complete system includes 320 miles of pipe of which 139 miles are to be of 22-inch with an equal mileage of 18 and 16-inch and the balance of 12-inch.

In order to lay this line it will be necessary to remove by trenching approximately 55,000 cubic yards of earth weighing 58,000 tons. This will be accomplished by using 10 ditching machines and two drag lines at as many different points.

The pipe and couplings to be used for this line will total 50,000 tons and will require 2,360 cars or 32 trains of 75 cars each to transport it from the mills to the unloading points. Four trains totaling 330 cars and carrying 8,000 tons of pipe were shipped within 48 hours after the contract was signed. The balance of the pipe will follow at the rate of 35 cars per day.

Two hundred and fifty-six miles of the pipe to be used on this line will have electrically-welded seams. This pipe will be the first of its kind to be used in a natural gas transmission system.

To protect the line against corrosion 48 carloads of pipe covering material will be required.

There will be one compressor station on the line with 4,800 horsepower of gas compressors with the necessary auxiliary equipment to transmit the gas. The line is of such size that 150,000,000 feet of gas can be transmitted by the installation of additional compressing equipment. The line is suitable for handling the gas at 400 pounds pressure.

The contract calls for the completion of the system during January of next year.

OPEN NEW STEEL MILL OF BETHLEHEM CORP.

The first unit in the new $10,000,000 pipe mill, the latest addition to the Bethlehem Steel Co.'s plant at Sparrow's Point, will begin operation this month, W. Frank Roberts, general manager, announces.

Following the announcement of the Pennsylvania Railroad that it would place orders for 300,000 tons of steel rails, it is reported other railroads will order more than the normal amount this year as well as large quantities of structrual steel. These orders, Mr. Roberts said, indicated a prosperous period of several months for the steel industry. With the packing season at its height, Mr. Roberts said the tin mill at Sparrow's Point was operating at capacity. The plant, employing 4,000 men, is the largest tinplate mill in the world.

M'DONOUGH IS SALES DIRECTOR

C. G. McDonough was appointed director of sales of the Selden Truck Corp. at a recent meeting of the officers of the company. He goes to his new work from the Kelly Springfield Truck & Bus Corp. of Springfield, Ohio, where he held the position of sales manager. Previous to his connection in Springfield he was sales manager of the commercial car department of the Willys-Overland Co., Toledo, Ohio.

SHORNHORST JOINS READING

R. J. Shornhorst, whose experience in selling oil field equipment has led to his appointment to the sales force of Reading Iron Co., manufacturer of wrought iron pipe, will confine his efforts to Pennsylvania oil fields for the time being. Mr. Shornhorst's headquarters will be at the Pittsburgh office, 1302 First National Bank Building.

NAMED DISTRIBUTORS

B. & A. Specialty Co. of Tulsa, Okla., has been appointed Mid-Continent distributor for the West America Rubber Co. of Los Angeles, Calif., makers of a complete line of slush pump packings and rotary hose.

EXCLUSIVE DISTRIBUTORS

The Union Wire Rope Co. of Tulsa, Okla., announces the appointment of the Jarecki Manufacturing Co. as exclusive oil country distributors for its wire products in Kansas, Oklahoma, Texas, Louisiana, Arkansas and the eastern fields.

OPENS TULSA OFFICE

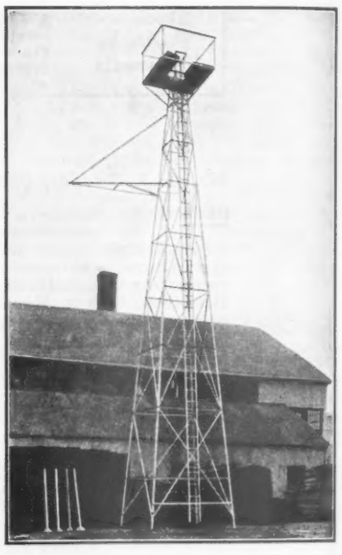
P. J. Sonner Gas Burner Co. of Winfield, Kans., announces the opening of a Tulsa office, which is in charge of V. S. Beck.

GOVERNMENT TOWERS FOR AIRWAY BEACONS

It is interesting to know, now that so much interest is being taken in aviation, that the International Derrick & Equipment Co. of Columbus, Ohio, and Torrance, Calif., has developed a special aviation department to supply the needs of this new industry.

When night flying was in its experimental stages International was called upon to submit designs for the first airway beacon towers. Today Ideco airway towers are being erected over hundreds of miles of airways for use in lighting these routes.

These towers built of heavy structural steel, are galvanized for protection against rust, corrosion and the weather.



They embody in their construction many of the features of steel oil derricks. Airway beacon towers are used as land lighthouses, they are equipped with powerful electric lights and are generally placed about 30 miles apart on the airmail routes.

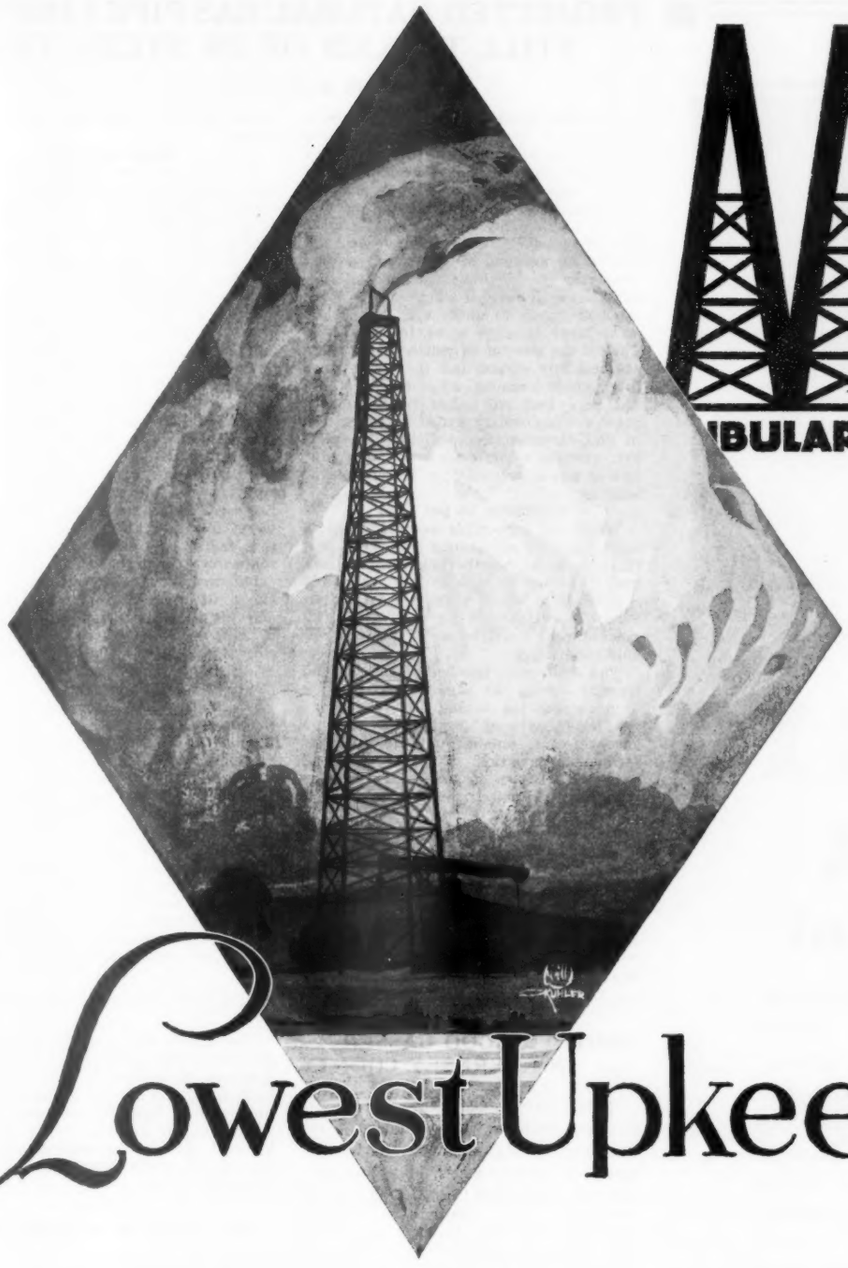
In addition to airway beacon towers, the International Derrick & Equipment Co. manufactures for the aviation industry, flood light towers, radio towers, airplane hangars and standard steel buildings.

SALES MANAGER IN CHICAGO

The Kennedy Valve Manufacturing Co. of Elmira, N. Y., announces the appointment of R. J. Flanagan as manager of its Chicago sales office and warehouse. Mr. Flanagan has been connected with the company for a number of years, both in the plant at Elmira and in the sales department. His previous position as Elmira district representative is being taken by J. T. Connelly who has been transferred to Elmira from the Cleveland sales office, and W. E. Blake is to replace Mr. Connelly in Cleveland. Both Mr. Connelly and Mr. Blake have also had extensive factory and sales experience with the Kennedy Valve Manufacturing Co.

TRADE LITERATURE RECEIVED

The Star Drilling Machine Co., Akron, Ohio, has just issued a bulletin, No. 20, which describes its new No. 47ST machine, designed for new drilling up to 2,500 feet and for deep cleaning-out work.



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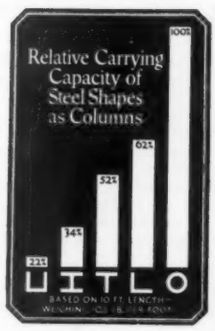

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The pipe line station of the Magnolia Petroleum Company at McComb, Oklahoma.

ELECTRIC POWER Scores Again!

The Magnolia pipe line station at McComb, Oklahoma, photographed above, shows ELECTRIC POWER "scoring again." The power equipment of this station consists of six-250 H.P. 3600 R.P.M. motors driving Worthington centrifugal pumps. The station handles an average of 45,000 barrels daily at a pressure of 800 pounds.

The building housing this equipment is all steel—small and compact and highly salvagable. One man is sufficient to a shift.

This much can be definitely said of **ELECTRIC POWER** in oil field work: a few years ago it was not taken seriously as a power medium, but today it has "won its spurs." It commands attention on a **MONEY SAVING BASIS.** Proof lies in the fact that it is more quickly installed; the initial investment as well as maintenance is less; it increases production due to continuous operation and uniform speed; it reduces fixed charges by the motors taking place of boilers, engines, gas and water piping. There is a saving too, in insurance costs, for the fire hazard is considered less with electric power.

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and General Manager

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PROJECTED NATURAL GAS PIPE LINES STILL TALKED OF IN STEEL TRADE

By B. E. V. Luty

PITTSBURGH, Pa., Oct. 3.—There is still more or less talk in the trade about the large natural gas lines projected, four altogether, but these have been talked of for so long, without any orders actually resulting, that the topic is not considered a particularly live one. It is clear that the prospective buyers are not holding off on account of price, unless they have very remarkable views on that subject, as some or all of the pipe mills are now ready to quote very low prices on a large tonnage order for line pipe. That is the quarter in which they always exercise any disposition they may have to purchase business, as prices on standard pipe and on ordinary oil country goods are jealously guarded. Any cutting in that direction would disturb the market, whereas a low price made on a pipe line is not a precedent as to subsequent business.

Operating 50 per Cent

While the pipe mills are estimated in some quarters as running at 60 per cent it is doubtful whether their operations really average as high as that. Possibly a close count would show present output at not more than 50 per cent of the full amount that could be made under favorable conditions.

The steel trade has been losing ground steadily during the past month, the rate of order booking having been highest in the latter part of August, perhaps on account of a number of special orders falling in the period. The general run of buying has shown no particular variation since July 1, except for the slight decreases of the past month.

Steel mill operations have suffered as a result of the lighter buying. Production of steel is now at about half way between 60 and 65 per cent of full capacity, against a 69 per cent average during July and August. The particularly remarkable thing is that there has been no semblance of an autumn revival in demand, such as is always to be expected unless general conditions are growing poorer.

Range of Orders

In the past few months the automobile industry has been blamed for much more of the dullness in steel than was justly due, for with last year a record year in automobile production the first five months of this year showed only 10.2 per cent less production than the same months of last year, while the next three months, June, July and August, showed only 23.7 per cent decrease from those months last year. As the automobile industry did not absorb as much as 15 per cent of all the steel made last year, these decreases would not count for a great deal in connection with the total demand for steel. However, while automobile production increased 15 per cent from July to August, it decreased considerably for September and is at a low rate still for this month. The poor demand for oil country steel is an important factor, and there has been less railroad steel made than last year. Fabricated structural steel has on the whole run a little heavier this year than last, and the agricultural implement industry is doing better. General line buying, outside of the special classes just named, is evidently decidedly lighter than a year ago. The steel industry as a whole is producing about 25 per cent less tonnage than a year ago.

Thus far the new prices on bars, shapes and plates are holding quite well. There had been a general market of 1.80 cents, Pittsburgh, on all three products, large or small lots down to carloads. Now the mills have a 1.75-cent minimum on large lots and a 1.85-cent price on carloads. Both prices are said to be holding strictly. Sheets are no easier, and may perhaps be a shade steadier than a fortnight ago. A good bit of question is raised as to whether strip prices are going to hold.

Pig iron, coke and scrap are all very dull.

ANOTHER GOOD GASSER IN GUERNSEY COUNTY

CAMBRIDGE, Ohio, Oct. 1.—Another good gas producer has been added to the Guernsey County area, and at a comparatively shallow depth. It is the Russell Oil Producing Co.'s No. 3 on the Brangiger farm, Section 20, Monroe Township, Guernsey County, one of the new fields of central Ohio. This well found its pay in the second Berea sand at a depth of 1,244 feet and is good for 2,000,000 feet. No. 2, same farm, is nearing the same formation and when brought in should bring forth another good gasser. This development is close to the town of Birmingham. Same company is starting No. 2 on the Edinburn farm, in the southeast quarter of the southwest quarter of Section 15, same township, and also starting No. 1 on the Elmer Redd farm, in the northeast quarter of the southeast quarter of Section 20, same township.

The Ohio Fuel Gas Co. is close to the Berea sand with its No. 1 on the O. M. Hughes farm, Section 7, Monroe Township, and in the northwest corner of the southwest quarter of the section, and if it comes in a gas producer will widen the present producing area some distance.

OIL PROSPECTING IN RUSSIA

Russian plans for the 1927-28 fiscal year include prospecting for oil in the Apsheron Peninsula, Kuban, Urals, Emba, Sakhalin Island, Cheleken Island, Uzbekistan and a number of entirely new localities. Prospecting will first be done in the Volga region, which has a favorable geographical location. The gas deposits in the Melnikov district of the Saratov Province are among those to be investigated, and it is planned to drill deep wells in the Melitopol district in Ukraine.

The Azneft has now completed surveys on new oil-bearing lands, with particular mention of the work done at Chaila, Fatamaya, and Altay. Successful results are reported from the geological surveys on the island Artama, where wells will be sunk during the coming year. The surveys on Zhily have also resulted in sinking of wells.

OIL THROUGH M'CAMEY LINE

SAN ANTONIO, Tex., Oct. 3.—The first oil through the Humble's pipe line from the McCamey field to Ingleside reached Ingleside September 21 and was run into some of the new storage that has been built there to accommodate the McCamey-Ingleside line. The 400 miles of 10 and 12-inch line will hold about 250,000 bbls. of oil and when doubled will hold twice that.

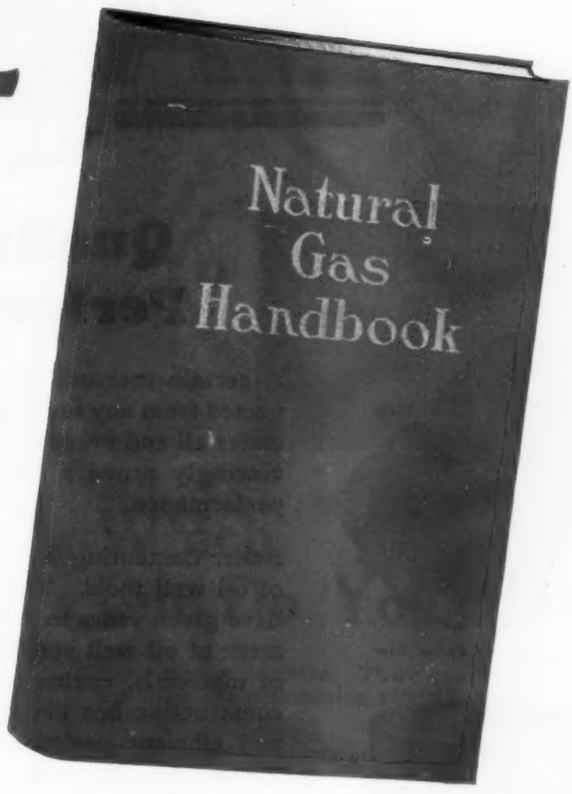
SAM CLARK PASSES

Sam Clark, veteran rig builder for the state of California, with the Emsco Derrick & Equipment Co., Los Angeles, was killed in an automobile accident on the way to Bakersfield, Calif. Clark was one of the pioneers in the construction of the modern oil well rig, and his character and disposition endeared him to a host of friends and associates in the petroleum industry.

OIL TEST OF ALBERTA COAL

CHATHAM, Ontario, Oct. 1.—A 10-pound sample of coal from the Levi Harker coal mine on the St. Mary's River, some 8 miles north of Magrath, Alberta, was recently tested for oil content at Salt Lake City. It is reported the test showed a potential oil yield as high as 40 gallons to the ton.

JUST—Published



Limited 1927 Edition is Now Available

The Basic Book of Natural Gas

THIS is the 4th edition of the book which has been the basic authority of the natural gas industry since its first appearance in 1913.

It has run through three editions in less than twelve years without any particular effort being made toward distribution. The 3rd edition was exhausted early in 1925. The new edition is presented to meet the demand that has continued and increased since that time.

This book contains the most comprehensive and authoratative information suitable to the uses of the natural gas engineer; and complete tables for ready reference by the practical worker. It is considerably advanced in many ways over previous editions; there are new tables and much other valuable data that have not hitherto been made available, and which will be available exclusively in this book.

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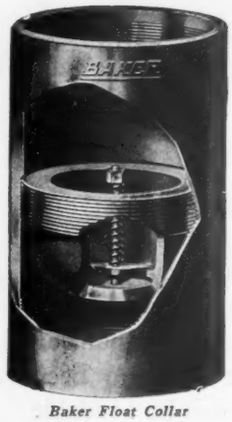

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Baker Rotary Expansion Wall Hook
Baker-McLaine Float Plug
Baker Float Shoe
Baker Gas Anchor
Baker Hinged Spider
Baker Heaving Plug
Baker All-Steel Pitman
Baker Reg. Hook Wall Packer
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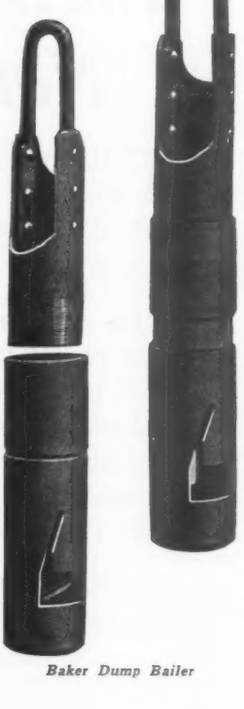
Baker Rotary Hole Guide
Baker Rotary Shoes
Baker Rotary Tool Joints
Baker Split Shoe Guide
Baker Standard Core Barrel

Baker Cement Basket



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COMMERCIAL POSSIBILITIES OF OIL PRODUCTION IN ALASKA TERRITORY

Petroleum is probably the only mineral resource of the Alaskan Peninsula between Iniskin and Chinitna Bays that offers a possibility of profitable commercial development, says Geologist Fred H. Moffit of the United States Geological Survey, in a statement just made public by the survey.

Petroleum seepages were known in the vicinity of Oil Bay many years before the great rush of gold seekers to Alaska after the discoveries in the Klondike, and attempts have been made to prove or disprove the presence of an oil pool. The work met with inconclusive results, although a number of wells were drilled, and was finally abandoned, probably from lack of means for continuing it.

Indicated Possibilities

The indications of petroleum that first directed attention to the possibility of obtaining oil in this part of the Cook Inlet region are springs or seepages of oil and gas. Many such springs have been reported and have led to the staking of numerous claims in the earlier days before the oil lands were withdrawn from entry and again in recent years after the leasing law of 1920 was passed.

Martin reports a strong seepage between high and low tides on the east shorte of Iniskin Bay, about 1,000 feet below the lower cabin, which produced an intermittent flow of oil, at one place coming from a crevice in the shale of the upper part of the Tuxedni sandstone. No sign of this seepage was seen, and possibly it has been diverted or is exhausted.

One of the oil seepages at Oil Bay is at the foot of the hill. The oil rises in a spring of water and collects on the surface of the water in a small pool. At the time the place was visited in 1921 not more than an ounce or two of oil could be taken from this pool in a day.

A strong flow of gas, bubbling up through water, about 2 miles north of Dry Bay, led to drilling at that locality.

Oil claims have been staked recently on the shores of Chinitna Bay, where oil seepages are also reported. Although the south shore of Chinitna Bay was examined rather carefully, no seeparges were found there by the surveying parties in 1921.

Oil springs might easily be missed, however, unless their location was fairly well known, for the vegetation by midsummer is so rank as to hide them. The known seepages, with the exception of the gas spring at Dry Bay, are within the area of the Tuxedni sandstone, and their presence probably depends on the fact that the rocks where they occur are faulted or conspicuously jointed, thus giving an opportunity for oil and gas to escape to the surface.

Lubrication From Pools

A sample of petroleum from the seepage at Oil Bay was collected by skimming the oil from the surface of the water, where it was continually rising from the bottom of the pool. An effort was made to obtain as much of the fresher oil as possible. Vegetable and earthy impurities were removed by straining through coarse cloth. Water could not be entirely removed. Oil for lubrication at the neighboring wells has been obtained from these pools in this manner. The fresher oil is dark green. That which has remained on the surface of the pool for some time is dark brown.

The oil has doubtless lost a large part of its volatile constituents, so that the analyses do not represent the composition of the live oil from wells in this region. Such live oil would have a lower specific gravity, a higher percentage of the more volatile constituents, and a lower percentage of the less volatile constituents, residue and sulphur. It would certainly be better than these samples in all respects and would resemble them in having a paraffin base and would doubtless be a refining oil.

The lubricating oils were distilled under diminishing pressure, according to refinery practice, until signs of decomposition set in. The residue obtained was unsuitable for making cylinder stock and was, therefore, distilled for paraffin oils. These paraffin oils contain a considerable quantity of solid paraffin—how much it was not practicable to determine with the small quantity of oil tested.

The oil seepages and drill holes showing oil are within the area of the Tuxedni sandstone. So far as is known none of the seepages, except the gas spring at Dry Bay, are within areas of the Chinitna shale or the Naknek formation. It is therefore believed that the source of the oil is within the Tuxedni sandstone or possibly at some lower horizon.

Two of the drill holes at Oil Bay are reported to have penetrated oil-bearing sands at depths of 500 and 770 feet and to have shown a considerable quantity of oil. These figures indicate the minimum depth below the top of the Tuxedni sandstone at which the oil-bearing beds can lie, but the evidence from this source is made highly inconclusive by the probable existence of an eastward-trending fault of considerable vertical displacement between the drill holes and the mountains on the south. This fault is exposed on the shore of Iniskin Bay, and if it extended eastward to Bowser Creek it would increase rather than decrease the estimate given.

It appears probable, although it is not definitely proved, that many hundred feet of the sandy shale that forms the upper part of the Tuxedni sandstone is missing between Oil and Iniskin Bays and that the oil seepages and the oil from the drill holes may well come from a horizon as low as the middle of the Tuxedni if not lower.

Cold Bay District

The oil seepages in the Cold Bay district, on the Alaska Peninsula, issue from two formations. In the vicinity of Cold Bay they come from the Shelikof formation, which contains beds equivalent in time to at least part of the Chinitna shale, for they carry the Cadoceras fauna. The seepages on the Pearl Creek Dome, west of the south end of Becharof Lake, come from beds of the Naknek formation, which caps the dome. The oil, however, may originate in the Shelikof formation, below the Naknek, and thus came from practically the same horizons as that in the seepages near Cold Bay.

The relation of the oil seepages and wells to the geologic structure of the formation in which they occur must be considered in predicting the location of a possible oil pool. The seepage on Iniskin Bay is near a fault, and the principle seepage at Oil Bay is in a zone of jointing and faulting. The position of the east and west shores of Oil Bay was determined by a system of vertical faults and closely spaced joints, which in general strike north 20 degrees west.

The seepage and drill holes at Oil Bay are in line with the west shore of the bay and unless the fracturing does not extend that far north the position of the seepage may readily have been controlled by the same causes that controlled the form and location of Oil Bay.

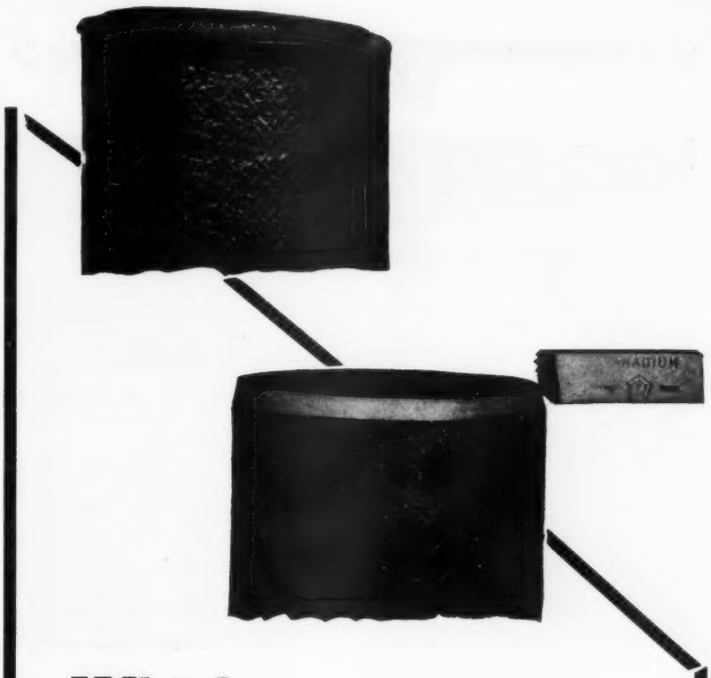
The accumulation of oil, however, would be determined by other conditions than these, and in this locality it might be expected to depend primarily on the structure of the beds and the presence of rocks of proper character to contain and to retain the oil. In addition the quantity of oil in a given reservoir would also depend in part on the extent of the gathering ground or drainage area.

Dip Seaward

The rocks of a narrow curving belt along the coast of Cook Inlet dip seaward in a monocline that carries them from view beneath the water. This structure includes the rocks above the Tuxedni sandstone as well as that formation and is so pronounced that it suggested the name Tilted Hills for the mountains of the belt.

The Tuxedni sandstone of the interior and the northwest side of the peninsula

(Continued on Page 112)



Which Cut Do You Prefer?

It's a foolish question. There can be but one choice, but many are still cutting pipe as shown in the upper illustration.

If you would eliminate your pipe cutting problems on 2" to 4" pipe for all time, always have a smooth straight cut without burr with the edge neatly chamfered, to easily start the threading dies on the pipe, as shown in the lower illustration, then order from your dealer today a new—

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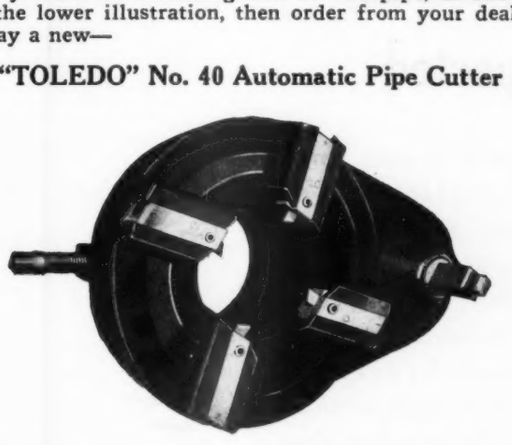

This remarkable tool cuts rapidly, leaving a straight, square end cut without burr. It is compact, easy to handle and weighs but 65 pounds. Knives fed automatically. Very simple to operate. Net price but $60.00 f.o.b. Toledo. It is the pipe cutter you need for your work. Order one today from your supply house.

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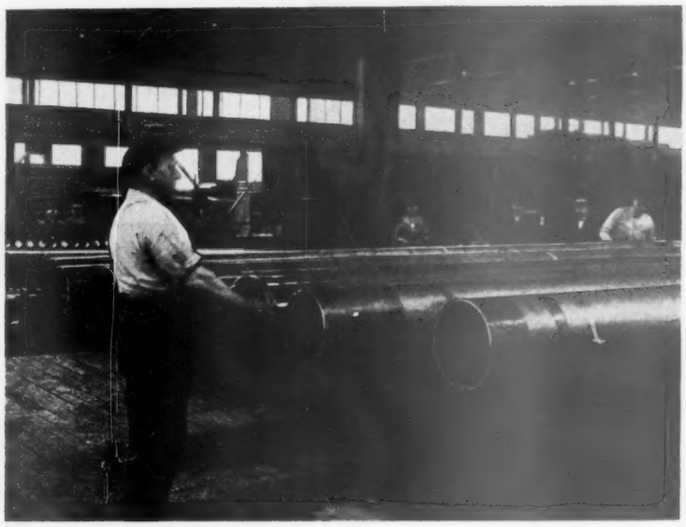
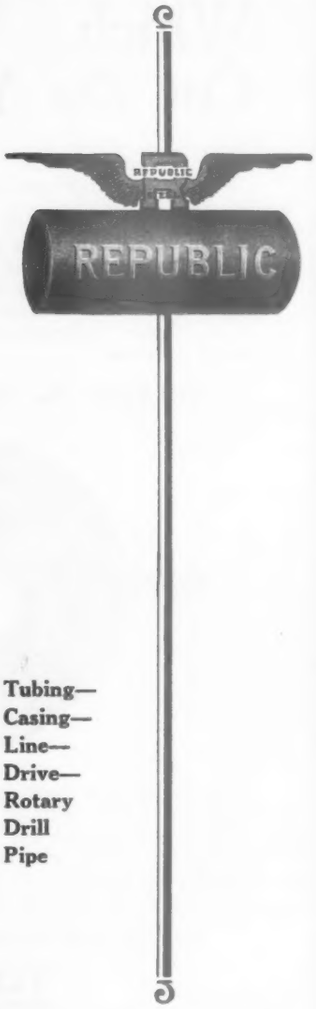


Each Piece of Republic Pipe Is Carefully Inspected



Both ends of each length of Republic Pipe are checked for size. The plain end line pipe passing over the inspection table shown above is part of an order for 24 miles of 12¾" O.D. shipped to the Latex Construction Company for service in Louisiana.

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OPERATORS IN PINE ISLAND FIELD ARE INSTALLING GAS LIFT DEVICES

By Neil Williams

SHREVEPORT, La., Oct. 3.—One of the latest fields in which the air-gas lift will be applied in the hope of improving production is Pine Island of Caddo Parish, Louisiana, where two companies already are installing compression units, and are conducting experiments on some of the deep Trinity horizon wells which have been completed there.

The only two companies so far building units are the Magnolia Petroleum Co and The Texas Company. The former company within the past month has put three Cooper compressors into use and is installing three additional, while The Texas Company is operating one Ingersoll-Rand engine and will have two Bessemer engines running within the next week.

While either air or gas can be used, conditions in the Pine Island Field are more favorable to operating the units with gas. Due to inadequate line facilities out of the field there is considerable surplus of gas there. Air lifts have been operated by some companies in several fields at times for many years, particularly in the Smackover Field, but even they have not been used to any important extent.

Both the Magnolia Petroleum Co. and The Texas Company are to operate their gas lifts in connection with natural gasoline plants, recycling the gas into the wells and back through separators and through the absorbers. The Magonlia Petroleum Co. has had a Southwestern portable absorption plant in operation for several months and recently completed the installation of a permanent plant to handle from 20,000,000 to 30,000,000 feet of gas daily. The Texas Company is installing its first plant, which will be one of Southwestern's latest "75" semiportable type of absorption units capable of handling around 20,000,000 feet of gas daily.

Recycle the Gas

Operations of both companies so far are only in the experimental stage and neither company has ascertained definitely what results can be obtained in the Pine Island Field. The Texas Company at present is handling approximately 580,000 feet of gas through its one Ingersoll-Rand installation. This a two-stage, 120-horsepower motor. As soon as the two Bessemer units are installed, each 165-horsepower, around 2,000,000 feet of gas will be used. It is planned to operate the wells on a pressure of around 300 pounds with the wet recycled gas from the separators going to the gasoline absorbers at 30 or 40 pounds.

Magnolia Petroleum Co.'s plant is on its Robertshaw lease in Section 23-21-15, and at present it is handling one deep well, No. 20 Robertshaw, which is blowing 325 bbls. of oil and 600 bbls. of salt water from a depth of 3,722 feet. The Texas Company's installation is on its Caddo Mineral Land Co.'s lease in Section 14-21-15, one well, the No. 42, being blown for 245 bbls. daily. The latter is a deep well completed December 1, 1926, flowing 60 bbls. of oil from 3,918 feet. The Magnolia's well is one of the newer completions, being completed July 13. Other deep wells, however, will be put on the lifts as soon as additional units are installed.

Operators Interested

Due to the extreme erratic fluctuations in production of the Pine Island Trinity horizon wells, experiments with air-gas lifts are being watched closely by all operators as a possible means of steadying the flow of individual wells and boosting the output of older producers. The deep producing horizon of this field, which has come into prominence since the first part of July following the completion of several initial gushers, now has 16 producing wells with more than 30 other tests drilling. Daily production has hovered between 4,500 and 5,000 bbls. in the face of the steady increase in the number of wells, leading some operators to believe that the wells are drawing on each other. Latest wells, with few exceptions, have shown nothing but salt water and gas. It is these reasons that offer special inducements for experimentation with air-gas lifts.

Installing one gas lift unit on The Texas Company's Caddo Mineral Land Co. lease in the Pine Island Field. The water cooling tower for the gasoline absorption plant also to be installed is shown in the foreground.

Two Bessemer gas compression engines being set up by The Texas Company in the Pine Island Field.

Pine Island Trinity horizon wells have been marked by heavy gas production, the total volume being swelled beyond field and line facilities by the rapid completion of wells due to the intense drilling activity which has existed in the field. This surplus gas has furnished one of the biggest waste problems with which the Louisiana Department of Conservation has contended, necessitating several conferences among operators and commission officials on how to conserve the gas and at the same time flow the oil.

Despite the conferences and changes in operating pressures, considerable gas unavoidably has been wasted in that field and from this angle the installation of gas lifts is another important develop-

(Continued on Page 105)

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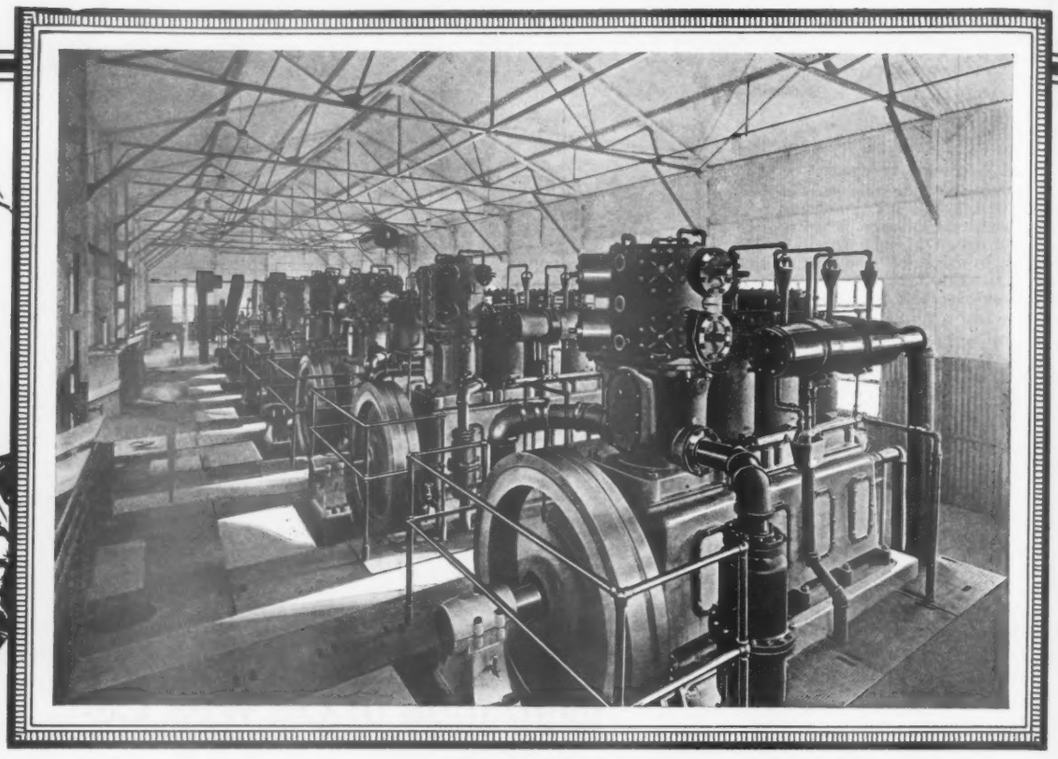


The "Modern Idea"

Numbers of gas compressing stations with batteries of Hope Vertical Compressors are demonstrating, in service, all that was claimed for the modern-idea equipment, when the high speed, vertical units were first introduced.

To call the roll of these stations is to name Companies noted for keenness in planning for operating economy. Their choice of Hope Vertical Gas Engine Compressors was an obvious one when their engineers had analyzed the value of Hope equipment.

The factors they, and you, must consider are, briefly:

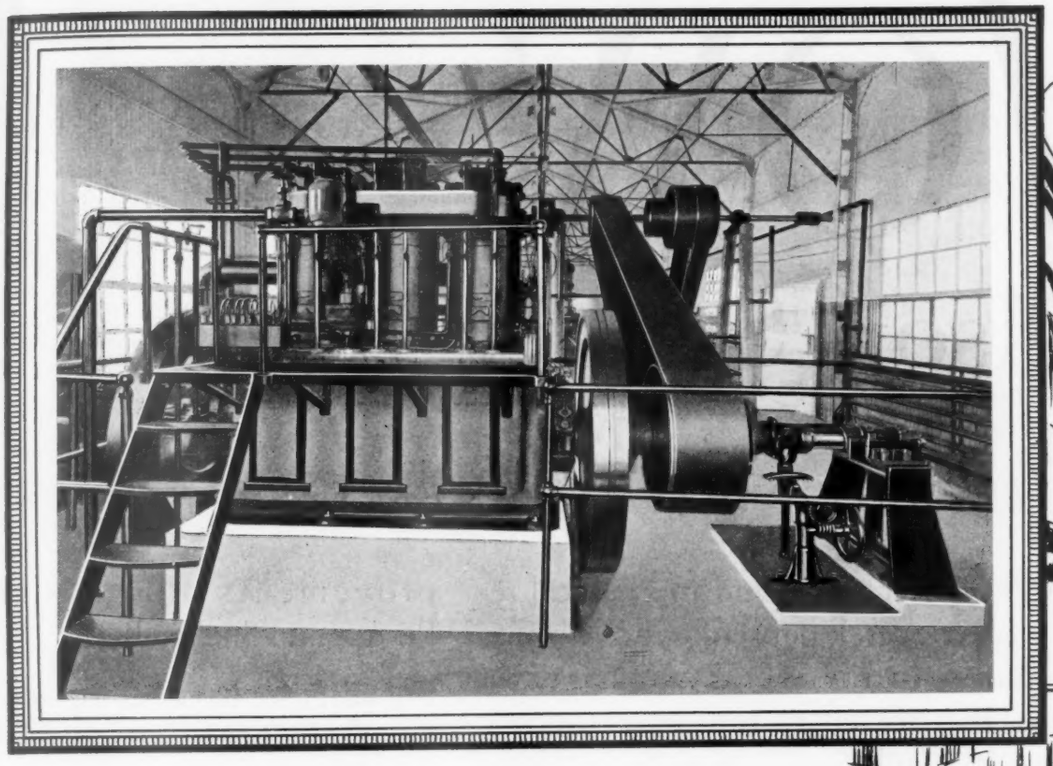
Efficiency—in the case of Hope Engine-Compressors at the least equal to the best of alternate equipment.

Overall Cost—generally in favor of Hope units when purchase price, transportation, erection, and attendance are all calculated.

Flexibility—decidedly greater in a multiple-unit Hope equipped station.

Depreciation—with Hope Engine-Compressors, figures so low as to be record-making for this class of equipment.

Operating Expense—low indeed, with engines conservatively rated and with full-automatic force-feed and flood lubrication.



Gas Pumping Station

Auxiliaries—the usual equipment, and preferably with a dependable Hope Gas Engine as a primary source of power.

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Look at it any way you will, the "Modern-idea" gas pumping station offers so much more of service per dollar of construction cost that it is destined to establish itself as standard wherever new lines are built—or wherever existing stations are re-equipped.

For gathering service Hope builds units whose design and superiority in operating characteristics make them equally to be preferred. If you have not acquainted yourself with their advantage, you should do so.

Catalogs and operating data on modern-idea stations are available to those who are interested.

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Progressiveness in the Axelson factories has been tempered with conservatism, yet if you will study the history of Sucker Rod progress you will find that Axelson has always been the first to introduce every *genuine* improvement

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Only Axelson Sucker Rods can embody the famous Axelson Vanishing Thread 100%

For years we have been quietly introducing betterments—particularly in Axelson Sucker Rods. A countless number of improvements have been introduced. The Rods we are making today are finer than those made previously—infinitely finer than contemporary makes, because we have kept years ahead in the adoption of *proven* principles of manufacture.

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Safety Directors Hold Annual Meet

Petroleum Section Told of New Methods in Reducing Hazards in Production, Refining and Marketing of Oil

By J. B. Waldo

CHICAGO, Oct. 1.—The sixteenth annual safety congress held in this city this week was undoubtedly a very successful meeting. Members of the management state that it far exceeded in attendance, general interest and attractions any previous meeting of the organization. The actual registration exceeded 2,900 and was about 800 larger than the attendance at the meeting of last year. Much credit for the success was also given to the fact that the entire congress had been carried out under one roof and that, aside from plant trips and the open air safety program in Soldiers Field, there was no necessity for any attendant at the congress to leave the hotel.

For the oil men, the chief attraction were the meetings of the Petroleum Section. These were held in a room capable of seating about 100 individuals and the capacity of this room was taxed at each session. Sessions were held each day from Tuesday to Friday inclusive. On the morning of the second day the election of officers was held. The report of nominating committee which had been previously appointed by the directors was adopted without any changes.

It would be difficult to name those addresses that were of greatest interest. Practically every paper read was followed by discussions that brought out points of great interest and value to those present which supplemented the papers as read. It was evident that the members of the Petroleum Group were all experts in their work.

Standard Plan

The great value of the discussions among these experts in their various lines was illustrated several times during the sessions. In one instance the question arose as to the best way to secure suggestions from employes and this brought out a description of the workings of the "Coin Your Ideas Plan," in the Standard Oil Co. of Indiana refineries. Each refinery has its own safety council and the employes are invited to make any suggestions for the safety of the employes or the plant. These suggestions are considered by the local council, and if approved are sent to the other refiners. If they meet the approval of these other plant organizations they are forwarded to headquarters and a prize is awarded to the author of the suggestion of at least $5 and may range as high as $300. In another refinery the regulations for the safety of the plant and its employes were made up from the suggestions of the workers.

Another interesting discussion resulted from an inquiry addressed to Mr. Donovan of the Standard Oil Co. of California. Mr. Donovan had been describing the methods used to prevent tank fires on the coast by his own and other refining organizations. A discussion arose as to the best way or of possible ways of delivering fire fighting chemical automatically to the top of the oil.

He was asked if they had even considered having a chute permanently attached under the storage tank of the material, the other end of the chute to be floated on the surface of the oil by some suitable method.

Mr. Donovan replied by describing several such methods. One of which he spoke favorably was to have a 16-inch steel pipe connected with the storage above the oil tank. This pipe would be pierced with windows at intervals and extend to the bottom of the tank. The plan was for the material to be released and to drop down the pipe. It was thought that it would strike the surface of the oil and be delivered through the windows in the pipe just above the oil level in the tank. On trial it was found that the material struck the oil with such force as to go to the bottom of the tank and come to the surface through the oil.

They were now experimenting with a float in the pipe much resembling a disk auto wheel which would float on the oil and arrest the antifire material and spread it out over the surface of the oil in the tank. These are but a couple of samples of the interesting and very valuable discussion that followed the reading of the papers.

Methods of The Texas Company

A. A. Nicholson, of The Texas Company, explained the methods used by his company in developing interest in safety measures and emphasized that "safety, to be effective cannot be luke warm and must start from the top of an organization and work down." He said further:

"In The Texas Company, as in other concerns of a like nature, there are great departments which correspond to other and separate industries. For instance, the refining department, the sales department, the producing department, the marine department and so on. For a long time we worked under the theory that a different kind of safety was required for each of these particular departments. We had the cart in front of the horse, and so we didn't get very far. Now, we are putting over a general program of safety for the company as a whole and then developing the modifications to meet peculiar situations as they arise. But we do not consider that safety is a mass proposition, and herein we have erred in the past.

"We start on the assumption that every worker coming into the organization is of unsafe mind. If we are wrong, so much the better. Our initial step is to bring safety to him as an impressive personal message—not simply that safety is a good thing generally for the whole world to accept, but that it's a personal issue which he must regard as being just as essential to his life as the air he breathes or the water he drinks. It is not advanced as a compulsory item. It is offered to him and thoroughly though briefly explained, and 99 per cent of the workers will buy under such methods of merchandising. This procedure is carried on through a sort of vestibule safety school—not in mass formation, but individually.

The foreman takes the new worker in hand and drives the wedge a bit deeper into his heart by disciplining him in safe methods; not by compelling or threatening or driving him, but by winning him over and bringing to the surface the very best that there is in him. The first job and the hardest job that any foreman has is to make his men like him. When he can do that, the rest is easy. True, he is responsible for the manner in which the job is carried on, but his big responsibility is in driving the wedge of safety down into the hearts of the workers until they open right up. Workers don't require bossing nearly as much as they require friendship and fellowship. A job should be a place of happiness and not a semblance of a chain gang, and this is made one or the other by the foreman. It does not require a prophet to gauge the accident standing of a gang when every man would go to hell for his foreman, but the gang is trying to "get" their foreman generally gets hurt.

"So, from the standpoint of safety in our concern, we have turned our thoughts to the individual worker, telling him, teaching him, and taking him through the busy avenues of industry—training his finders, developing his mind, and wining his heart—bringing him out as an individual, rather than leaving him a part of the great mass—and showing him, not the horrors of the careless, but the happiness of home and safety."

Much of the safety work being done is at the refineries, but E. M. Hearne, safety engineer for the Marland Refining Co., presented some new ideas regarding the extension of safety talks to the marketing division and included a summary of the methods used and the success of the work over a short period of time. Mr. Hearne said:

"Periodical inspections of all stations and warehouses are made by the safety department, at which times the men are encouraged to discuss not only their safety problems, but their regular operating, sales, and service problems as well. It is felt that a great deal of importance should be attached to this policy, because it not only has a tendency to act as a sort of safety valve for their mental condition, enabling them to think along straighter lines, but gives us an opportunity to study their methods of thinking and working; and this, coupled with the general condition of the stations, gives us a very good foundation upon which to base our work with them. During the discussion after the inspection is made, the weak points discovered in either the equipment or methods of operation are pointed out to them full explanations as to why they are considered weak. The average man employed in our stations is capable of following instructions and rules better if he thoroughly understands the reasons for them. An inspection report is made to the general office with a copy to the manager of the division in which inspection was made, outlining to them the things that were found and the suggestions offered to the man at that point, so that the divisional staff can follow up the recommendations and see that necessary changes are made and the suggestions put into effect.

"Also periodical letters are written to the divisional staffs giving them a list of unsafe practices observed while making inspections, together with a list of the causes of all no lost time accidents; the lost time accidents are given in the formal monthly report, a copy of which goes to each divisional manager.

Eliminating a Hazard

"One of the changes which has gone far toward eliminating a rather serious hazard is in the old type grease pits which were narrow and caused the operator to work in a cramped position. They were so short that a large car completely covered them, allowing no space for a hurried exit, and in some cases none at all, in case of emergency. To some it may appear that the hazard in the average small grease pit is of no consequence. True, it is seldom that anything serious has come from them, but the possibilities are great, for a large number of operators do not spend enough time and work on them to keep them clean. The pit having its floors and walls covered with oil, grease and crank case drainings, is a very good setting for a serious accident if it is not so constructed as to allow the operator easy and rapid egress.

"Another important step was taken when an operating and fire prevention manual, containing a set of rules covering the operation of all equipment and the handling of petroleum products in a manner to conform with all state and national laws, was sent to all agencies.

"Out of seven of these larger points upon which we had material to base comparative figures over the first six months of 1926, as against the first six months of the present year, four showed a decrease in frequency rate, two of them being perfect records for 1927. The fre-

(Continued on Page 90)

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Mason Regulators cover every kind of pressure control,—you do not need to look farther than the Mason trade mark to be certain of getting the regulator that fits the job.

And every Mason Regulator has been designed, built and *tested* to meet the most exacting conditions of service. Forty-five years of specialized experience in pressure control engineering is back of every one.

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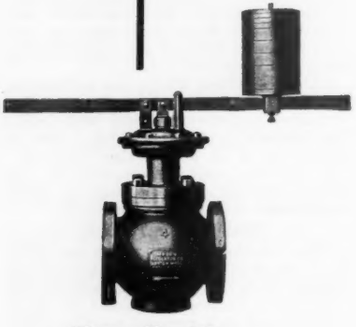

Mason No. 266 Casing Head Gas Regulator.

Mason Regulators Include

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LA.-ARK. WILDCATS

(Continued from Page 44)

Producing Co.-Wooley & Collins' No. 1 (J. S.) Farrington, Section 23, is fishing for tubing and packer at 3,106 feet.

Southeast of the Carterville Field, Doern and associates' No. 1 Bollinger, Section 9-22-11, is drilling at 1,900 feet after having whipstocked through the casing at 1,450 feet. Sales & Walker's No. 3 Bollinger, Section 30-23-11, is milling out of casing at 2,560 feet. Total depth of the hole is 2,690 feet. In the southwestern part of the parish, H. S. Goodwin, trustee, is to make a test of the Nacatoch sand at 1,006 feet in No. 1 Curtis, Section 2-16-13. Jensen, Rogers & Gibson have started a test, No. 1 Hale-Rumbaugh, in Section 17-18-11, eastern Bossier Parish. Sligo Syndicate has a rig up for another test in the Sligo district. This will be the second test on the Smith farm, Section 24-17-12. Triangle Drilling Co. is down 500 feet in No. 1 Sentell & Dickson, Section 3-20-14. Woodley & Collins are drilling at 1,200 feet in No. 1 Lincoln, Section 21-16-10.

Caldwell Parish

Southern Crude Oil Purchasing Co. is drilling at 1,414 feet in No. 8 Caldwell, Section 5-13-5e.

Catahoula Parish

S. D. Hunter is drilling below 200 feet in No. 3 Tensas Delta, Section 4-9-8e. Lochnager Oil & Gas Co. is drilling at 1,800 feet in its second test on the Beasley lease, Section 26-9-6e.

Claiborne Parish

El Dorado Chief Oil Co. has staked a location for No. 1 Jones, Section 8-20-6. Magnolia Petroleum Co.'s No. 1 Lee, Section 16-22-8, the only drilling test in the parish, is reaming to the bottom at 4,090 feet.

DeSoto Parish

Dixie Oil Co.'s No. 1 Jenkins, Section 9-12-11, is drilling lime at 5,584 feet. Magnolia Petroleum Co. is reaming at 3,193 feet in No. 1 Logan, Section 17-10-12. Wingfield and associates have started operations at No. 1-A Robertson, Section 18-10-12, and have set 140 feet of 10-inch casing.

Franklin Parish

Pittsburgh Exploration Co. has a rig up for No. 3 Moore, Section 12-11-6e.

LaSalle Parish

Eibert Petroleum Co. has abandoned as dry at 1,700 feet its No. 1 Hardtner & Tannehill, Section 34-11-2e.

Natchitoches Parish

Lawson & Pharris are drilling at 850 feet in No. 1 Wise, Section 28-5-6. Ohio Oil Co. is arranging to test a formation encountered at 3,135 feet in No. 2 L. & A., Section 26-13-6w.

Richland Parish

Aarnes and associates are drilling at 2,587 feet in No. 1 Hawley, Section 3-17-9e. Gulf Refining Co. has cemented 6⅝-inch casing at 2,318 feet in No. 2 Marshfield, Section 29-17-6e, and in No. 3 Marshfield, Section 30, a string of 10-inch casing has been cemented at 912 feet. Moody & Seagraves have completed No. 1 Hemler, Section 20-16-6e, making 14,000,000 feet of gas from sand at 2,407-18 feet. This company's No. 1 Jones, Section 15-18-7e, is drilling at 1,436 feet. Natural Gas & Fuel Corp. has cemented 6-inch casing at 2,285 feet in No. 1 Sartor, Section 20-16-6e. Ruston Drilling Co. is drilling out the plug cemented at 2,320 feet in No. 2 McCoy, Section 8-16-6e. Texas-Louisiana Carbon Co.'s No. 1 Broughton, Section 1-15-6e, is drilling at 2,782 feet. Woodley Petroleum Co. and Triangle Drilling Co. are down 2,240 feet in No. 1 Hemler, Section 31-18-7e.

Sabine Parish

Arkansas Fuel Oil Co. is drilling shale at 3,556 feet in No. 1-A Logan, Section 32-10-13. No. 2 Moore, same section, is drilling at 2,440 feet. Foster and associates have completed No. 1 Nabors, Section 30-10-12, estimated at 3,000,000 feet of gas. The hole was drilled to a total depth of 3,500 feet but the gas is coming from the 3,275-foot level at which the test blew out several weeks ago. Frazier and associates are drilling at 2,820 feet in No. 1 Harris, Section 29-10-12. Magnolia Petroleum Co.'s No. 2 Hall, Section 33-10-12, is in gumbo at 2,546 feet. This company has a rig up for No. 2 Rembert, Section 32-10-12. A. H. Tarver's No. 1 Long Bell, Section 5-8-13, is drilling at 3,189 feet. H. P. Tate has abandoned temporarily his No. 1 Cook, Section 23-10-11, after drilling to 3,295 feet. L. M. Emlet's No. 1 Bowman, Section 14-7-14, is drilling lime rock at 3,073 feet.

Webster Parish

Shreveport-El Dorado Pipe Line Co. is coring shale at 3,065 feet in No. 1 Gamble, Section 33-20-8.

Winn Parish

Ohio Oil Co. is drilling at 160 feet in No. 1 Edenborn, Section 31-10-4w. This company's No. 1 Rolen, Section 9-12-1w, is shut down waiting orders after testing a salt water flow both at 2,115 feet and 2,149 feet with a patented sand tester. Drilling has started at No. 2 Rolan, Section 5-12-1w. H. M. Roark is drilling rock at 157 feet in No. 3 Southern, Section 19-11-3w.

ARKANSAS

Union County

Booth and associates' No. 1 Rowland, Section 8-17-11, extreme eastern Union County, is drilling at 900 feet. In Section 21, Pitcher and associates have a rig up for No. 1 Arkansas Timber Co., W. R. Keever's No. 2 Ezell, Section 12-17-15, is bailing salt water after perforating casing from 2,164 to 2,172 feet. Magnolia Petroleum Co. has cemented 6⅝-inch casing at 2,975 feet in No. 1 Carroll, Section 1-17-14, after having tested 5,000,000 feet of gas with a sand tester. Total depth of the hole is 2,982 feet. This is about three-quarters of a mile northeast of Ohio Oil Co.'s No. 2 Crain, same section, which blew out during the week. The latter test blew out from a sand at 3,015-20 feet making more than 4,000,000 feet of gas daily and an initial flow of 30 bbls. of 26.8 gravity cut oil the first 30 minutes. However, salt water broke in, presumably from a broken casing seat, and increased in flow until the well was making 5,000 bbls. of fluid, 98 per cent salt water. Efforts now are being made to kill the well. Mazda Oil Corp.'s No. 1 Boyd, Section 9-17-15, has been abandnoed as dry after drilling to 2,692 feet. Rice and associates have cemented 6-inch casing at 2,919 feet in No. 1 Newton, Section 13-17-16.

Ouachita County

H. M. Harrell, trustee, is pulling casing and abandoning No. 1 Camden, Section 12-12-18. This test was drilled to a total depth of 2,105 feet without encountering anything favorable. Magnolia Petroleum Co. cored red, sandy shale at 2,642 feet in No. 1-B Stout, Section 28-14-16. Moody Oil Corp. failed to find any oil in the Blossom sand cored at 1,410 feet in No. 1 Bacon, Section 12-11-18, and will drill deeper. The sand showed only salt water.

Ashley County

A. T. Glassell and associates are drilling lime at 2,740 feet in No. 1 Keller, Section 10-19-5.

Calhoun County

Genther and associates are drilling at 1,856 feet in No. 1 Stout, Section 3-14-16.

Columbia County

Big Creek Oil Co. has abandoned without a test its No. 1-A Runyon, Section 3-16-21, drilling to 800 feet.

Hempstead County

Arkansas Natural Gas Co. has abandoned the location it had staked for No. 1 Carrigan, Section 2-11-26. It also has abandoned for a second time No. 1 Godlet, Section 34-10-26, at 1,842 feet. This test originally was abandoned early in September but the following week the rig was moved back on the location.

LaFayette County

Kensaw Syndicate is drilling at 1,935 feet in No. 1 Kensaw, Section 31-18-24. The test went through a salt water sand at 1,890-94 feet.

Miller County

Lenz and associates are drilling sandy shale at 1,970 feet in No. 1 Mann, Section 22-15-26. Guest and associates resumed drilling in No. 1 M. & P. Bank, Section 30-15-26, during the week but after reaching a total depth of 2,926 feet have shut down for fuel.

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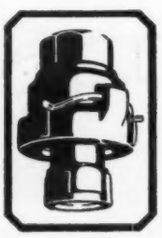

Valves and Joints

O&GJ 10-6 Gray

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One small leak in production may not seem to amount to much but when augmented by the others, each one is a dangerous menace. Wolves of Fire . . . Wolves of Waste . . . Wolves of Gravity—lost . . . with the rest of their pack prey upon the producer.

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OKLAHOMA FIELDS

(Continued from Page 44)

NE cor. NW SE, Section 35-8-6, Little River Pool.

Pure Oil Co.'s No. 1-A Thompson, SE cor. SW, Section 33-11-8, was completed for 125 bbls. from the Wilcox sand 4,097-4,150 feet. Nowata Oil & Refining Co.'s No. 3 Price, SE cor. NW NE, Section 3-10-8, is pumping 5 bbls. from sand 3,431-44 feet. Barnsdall Oil Co.'s No. 1 Ingram, SW cor. NW SW, Section 1-9-5, Earlsboro Pool, had an initial production of 1,909 bb'ls. from the Wilcox sand 4,412-26 feet. Empire Gas & Fuel Co.'s No. 6 Edmundson, SE cor. NE SW, Section 3-9-5, is dry and abandoned at 4,432 feet. The Texas Company's No. 3 Brown, NW cor. SW NW, Section 10-9-5, swabbed 35 bbls. from the Wilcox sand 4,443-58 feet. Magnolia Petroleum Corp.'s No. 2 Simpson, SE cor. NW SE, Section 10-9-5, an old well, was deepened to 3,570 feet and made 250 bbls. Barnsdall Oil Co.'s No. 4 Brown, SE cor. NE NW, Section 10-9-5, had the Wilcox sand at 4,419 feet, drilled to 4,433 feet and made 1,325 bbls. Gypsy Oil Co.'s No. 7 B. Carter, NW cor., Section 11-9-5, had an initial production of 2,460 bbls. in the Wilcox sand 4,250-77 feet. Barnsdall Oil Co.'s No. 1-A Davis, NW cor. SE, Section 11-9-5, swabbed 26 bbls. from the Wilcox sand 4,385-95 feet. Gypsy Oil Co.'s No. 2 Noble. SE cor. SW NE, Section 12-9-5, made 7,052 bbls. from the Wilcox sand 4,318-40 feet. Empire Gas & Fuel Co.'s No. 1 Barker, SW cor. SE NE, Section 12-9-5, was completed for 60 bbls. in the Wilcox sand 4,407-10 feet. Continental Oil Co.'s No. 3 Hol'ins, NW cor. SE NW, Section 12-9-5, had Wilcox sand 4,230-58 feet and made an init'al of 1,750 bbls. Barnsdall Oil Co.'s No. 3 Wasutke, SE cor. NE SW, Section 12-9-5, produced 1,308 bbls. from the Wilcox sand 4,342-57 feet. Carter Oil Co.'s No. 1 Mandler, NE cor. NW SW, Section 3-9-6, Searight Pool, topped the Wilcox sand at 4,347 feet, drilled in to 4,357 feet and made 35 bbls. after plugging back to 4,323 feet. Sinclair Oil & Gas Co.'s No. 3 Polly, SE cor. SW NW, Section 3-9-6, came in for 910 bbls. producing from the Wilcox sand 4,642-48 feet. Wilcox Oil & Gas Co.'s No. 6 Cluck, SE cor. NE NW, Section 4-9-6, made 197 bbls. on the swab, producing from the Wilcox sand 4,423-61 feet. Roxana Petroleum Corp.'s No. 1 Hull, NW cor. NE SE, Section 25-9-6, is dry and abandoned at 4,273 feet. Phillips Petroleum Co.'s No. 5 Strothers, NE cor. NW SE, Section 27-9-6, Seminole Pool, has been abandoned at 4,015 feet. Gypsy Oil Co.'s No. 1 July, NW cor. NE NW, Section 36-9-6, is a dry ho'e at 4,365 feet. No. 2 July, SW cor. NE NW, Section 36-9-6, is also dry, the total depth being 4,258 feet. No. 1 Cumsey, SE cor. NE SE. Section 10-8-6, Bowlegs Pool, made 617 bbls. from the Wilcox sand 4,115-45 feet. Tidal Oil Co.'s No. 6 Harjoche, NW cor. NE SW, Section 10-8-6, was completed for 245 bbls. from the Wilcox sand 4,118-71 feet. Carter Oil Co.'s No. 1 L. Jones, NW cor. SE SE, Section 11-8-6, made 2,585 bbls. from the Wilcox sand 4,110-30 feet. Indian Territory Illuminating Oil Co.'s No. 2 Lizzie, SE cor. SW NW, Section 11-8-6, produced 336 bb'ls. from the Wilcox sand 4,228-38 feet. Atlant'c Oil Producing Co.'s No. 3 Grayson, NE cor. SW NW, Section 13-8-6, had Wilcox sand 4,328-54 feet from which it made 235 bbls. initial. The Prairie Oil & Gas Co.'s No. 3 Jones, SE cor. NW SE, Section 11-8-6, was completed for 1,440 bbls. in the Wilcox sand 4,052-70 feet. Indian Terr'tory Illuminating Oil Co.'s No. 6 Fay, NW cor. SE NW, Section 13-8-6, had an initial production of 1,174 bbls. from the Wilcox sand 4,148-84 feet. Pure Oil Co.'s No. 15 Reed, NW cor. NE SW, Section 14 8-6, made 15 bb'ls. by swabbing the Wilcox sand 4,311-14 feet. No. 19 Reed, NE cor. NW SE, Section 14-8-6, came in for 288 bbls. from the Wilcox sand 4,246 66 feet. Indian Territory Illum'nating Oil Co.'s No. 9 Goforth, NE cor. SE NE, Section 15-8-6, made 436 bbls. initial from the Wilcox sand 4,055-90 feet. No. 3 Billington, SE cor. NW, Section 22-8-6, was completed for 1,120 bbls. from the Wilcox sand 4,320-34 feet. Empire Gas & Fuel Co.'s No. 4 Wise, SW cor. SE NW, Section 23-8-6, made 255 bbls. from the Wilcox sand 4,323-43 feet. Carter Oil Co.'s No. 4 Burden, NE cor. NW SE, Section 23-8-6, made 480 bb'ls. from the Wilcox sand 4,437-62 feet. Producers & Refiners Corp.'s No. 1 Dungan, had the top of the Wilcox sand at 4,174 feet, drilled to 4,182 feet and made 3,045 bbls. Magnolia Petroleum Corp.'s No. 1 Holwell, NW cor. SE NE, Section 22-8-6, is a dry hole at 4,221 feet. Roxana Petroleum Corp.'s No. 2 Amery, SE cor. NW, Section 28-7-8, is dry and abandoned at 1,702 feet.

Wagoner County

Baldridge and others' No. 1 Childers. SW cor. NW, Section 22-18-17, is shut down at 540 feet. A. Chapman's No. 2 Colbert, SW cor. NE SE, Section 19-18-18, is shut down at 700 feet.

A. A. Williams' No. 4 McIntosh, NE cor. SW NE NE, Section 12-18-17, is dry at 282 feet. William McDougal's No. 1 Dan, SE cor. NW NW, Section 21-17-15, was completed for 2,000,000 feet of gas in sand 1,868-90 feet.

Okfuskee County

The Prairie Oil & Gas Co. is moving the rig in for No. 1 Strain, SE cor. SW SE, Section 17-10-9.

CALIFORNIA HAS PUT ITS HOUSE IN ORDER

(Continued from Page 34)

particularly if, as some legal talents have advised, it would be necessary to amend the Constitution of the United States. We should be slow to jeopardize estab'ished principles of personal initiative and endeavor.

In express'ng these views, the writer draws a distinction between government control and government co-operation. Government co-operation has ever been the best friend of the oil industry. Perhaps a majority of thinking men would welcome the considering by Congress of ways and means to aid the oil industry to better solve its own problems. Such a procedure would seem to be infinitely wiser, at this time, than to swamp our Government with the complex administration of a major industry.

The oil industry will probably hold its fate in its own hands during the next few months. Without surrendering our individual opinions, it might be well to listen carefully to those bodies of men who have been, or who may be, instituted and convened by the industry itself to plan just methods of meeting our present problem. In considering the recommendations of leaders who have risen through sheer ability to the positions which they now occupy, let it be remembered that we are all of us, producer, ref'ner, retailer, equipment man, and technician, in the same boat. National production is at this writing in a condition to be held in leash, but there may be an entire'y different story a month or two hence. It is universally recognized that the time to stop a fire is before it gathers headway.

It would be unjust to ask particular individuals or groups of men in the industry to suffer grave personal loss for the benefit of others. We are confronted by no heroic proposition, but by a practical problem that can be ethically solved. In solving that problem it may become necessary for those of us who can do so without personal disaster, to concede a point, and to stretch as many others of a commercial nature as we reasonab'y can. The oil industry, at this time, holds its fate in its own hands.

NOT EASTERN'S MAGAZINE

The Eastern Torpedo Co. did not own the magazine near Bowling Green, Ky., which exploded recently, according to a statement made by an official of the company. The magazine, with the 200 quarts of nitroglycerin which exploded was owned by another concern.

VISITOR FROM PERSIAN FIELDS

W. H. Cadman of the Anglo-Persian Oil Co., Ltd., Masjid-i-Suleiman, South Persia, was a visitor to the office of The Oil and Gas Journal last week.

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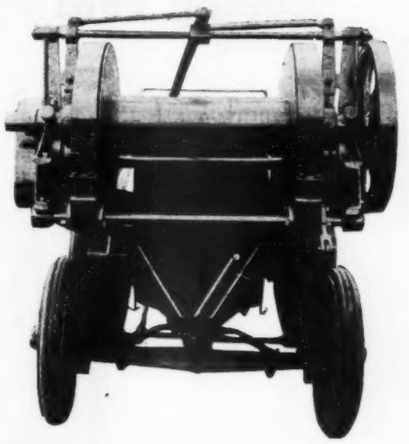

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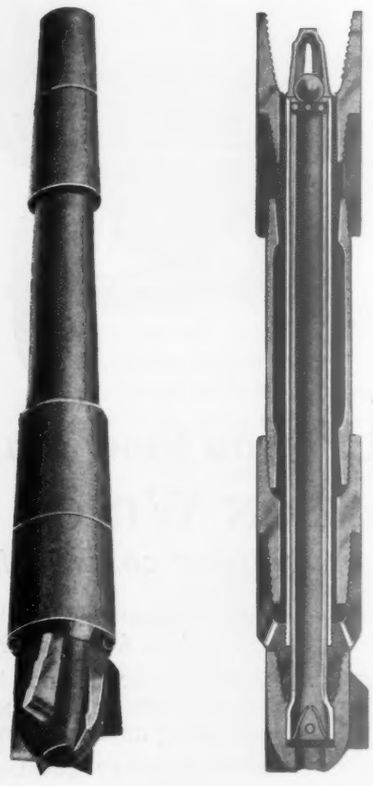

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LOUISIANA-ARKANSAS

(Continued from Page 46)

ing at 810 feet in No. 1 Harris, Section 20-20-4e.

Webster Parish

Crusaders Oil & Developing Co. is bailing No. 18 Hope, Section 24-21-10, Cotton Valley Field, preparatory to a test of a broken sand at 2,502-05 feet. Magnolia Petroleum Co.'s No. 1 D. G. Cox, Section 22, is drilling at 297 feet. This company's No. 1 Cole, Section 27, is in gumbo at 761 feet. The latter two are to be deep tests. Magnolia's No. 3 Cox, Section 23, another deep test, is down 4,301 feet where 6⅝-inch casing is being set. This company's No. 4 Marshall, Section 21, has 6⅝-inch casing cemented at 2,547 feet. The fifth test on this lease is drilling at 1,340 feet. Ohio Oil Co.'s No. 4 Holloway, Section 23, is at 3,400 feet where 6⅝-inch casing is being set. Magnolia Petroleum Co.'s No. 2 Branton, Section 6-22-10, has been completed at 2,600 feet producing 8,000,000 feet of gas with a rock pressure of 460 pounds. This company's No. 1 Waller-O'Bier, Section 32-23-9, has a string of 6⅝-inch casing cemented at 2,649 feet.

ARKANSAS

Smackover Field

In the Norphlet district on the Union County side Keen & Woolf cored blue shale at 2,698 feet in their No. 4 Murphy, Section 9-16-15, which they are deepening from a level of 2,650 feet where it formerly was completed as a small gasser. Lion Oil & Refining Co. has cemented 6⅝-inch casing at 2,280 feet in No. 7 Hays, Section 4-16-15. Magnolia Petroleum Co. is making arrangements to deepen No. 6 Tatum, Section 7-16-15, an old well completed a year ago at 2,007 feet. Magnolia Petroleum Co.'s No. 3 Murphy, Section 8, is producing an estimated 3,500,000 feet of dry gas from sand at 2,688-93 feet. Magnolia Petroleum Co. has a rig up for No. 7 Wilson, Section 17-16-15. Southern Crude Oil Purchasing Co.'s No. B-7 Lyell, Section 3-16-15, is pumping 100 bbls. of fluid of which 92 per cent is salt water, from a sand at a total depth of 2,602 feet. This is an old well deepened from a sand at 2,360 feet. This company has another well in No. A-5 Wells, Section 15-16-15, which has been completed at 2,594 feet pumping 250 bbls. of fluid, of which 98 per cent is salt water. Standard Oil Co. still is fishing in No. 33 Murphy, Section 4-16-15. Unity Petroleum Co. is drilling plug in No. 12 Roper, Section 3-16-15, cemented at 2,373 feet. This company also is going into No. 8 Roper, same section, which was completed two years ago flowing 800 bbls. from a sand at 2,377 feet, and in perforating casing from 2,282 to 2,297 feet. In Ouachita County, Owenwood Oil Corp. has cemented the bottom of the hole at 1,971 feet.

In the Louann sector of Union County, National Consolidated Petroleum Corp. has 200 feet oil oil standing in the hole from a sand at 2,623-43 feet in No. 1 Fagg, Section 8-16-16, and is waiting on a pumping rig. The Texas Company's No. 1 Davisson, Section 26-15-16, Ouachita County, is drilling ahead at 2,450 feet after testing salt water at 2,247 feet.

Stephens Field

Brewer and associates' No. 1 Curry, Section 32-15-19, Ouachita County, is drilling at 1,800 feet.

Nevada County

Autrey Oil Co. has cemented 6-inch casing at 1,185 feet on top the producing level in No. C-2 Martin, Section 6-14-20. In the same section, Humble Oil & Refining Co.'s No. 1 Fairchild is to be put on the beam with an oil sand at 1,187-91 feet. Humble already has a derrick up for its second test on this lease. Burnham and associates are fishing for casing at 1,259 feet in No. 1 McKinney, Section 9-14-21. J. J. O'Brien's No. B-4 Haynie, Section 1, has 6-inch casing cemented at 1,152 feet. In the same section this operator has a derrick up for No. A-5 and No. B-9 Moss and has two other tests on the sand, one of which, No. B-5 Moss is waiting on a pumping rig for sand at 1,156-62 feet, and the other, No. B-8 Moss, has 6-inch casing cemented at 1,146 feet.

GULF COAST FIELDS

(Continued from Page 49)

County Oil Co.'s No. 1 Hawkins is shut down in shale at 1,985 feet.

Orange County

Gulf Production Co.'s No. 15 Lee Hager fee is bottomed at 4,750 feet and will be abandoned at that depth. Sun Oil Co.'s No. 2 Brown is being rigged up to drill deeper. Rycade Oil Corp.'s No. 11-B State is drilling at 3,850 feet. Texhoma Oil Co.'s No. 16 Chesson set the strainer at 3,425 feet and is being bailed. Same company's No. 8 Chesson was dry at 3,025 feet. Brownie Babbitte Oil Co.'s No. 1 Peveto is drilling at 3,125 feet. Sinclair Oil & Gas Co.'s No. 4 Granger set the strainer at 3,300 feet and is being put on the pump.

Walker County

N. Thompson and associates' No. 1 Thompson Lumber Co. is shut down at 1,730 feet. Twenty miles northeast of Huntsville, Head and Thompson's No. 1 Thompson is drilling at 2,291 feet.

Waller County

Fred Fulkinger and associates' No. 1 Fulkinger, 7 miles east of Hempstead, is to resume drilling at 910 feet. J. R. Garrett and associates' No. 1 Garrett is drilling gumbo at 200 feet. The well is 12 miles south of Hempstead.

Wharton County

At Boling, Ingram Prospecting Co.'s No. 1 Mensing is shut down at 831 feet. Hyde Production Co.'s No. 1 Fotjek is shut down at 2,402 feet in gumbo. Southern Exploration Co.'s No. 1 Mullins is a location.

LOUISIANA

Acadia Parish

In the Evangeline Field, The Texas Company's No. 2 Rayne is drilling at 3,160 feet and the same company's No. 2 Latrielle-B is being bailed at 1,975 feet. Yount Lee Oil Co.'s No. 1 Latrielle is drilling at 3,060 feet. Coastal Oil & Fuel Corp.'s No. 95 Crowley fee is drilling at 1,775 feet. Evangeline Oil Co.'s No. 1 Conklin is a derrick.

Calcasieu Parish

Vacuum Oil Co. and Gulf Refining Co.'s No. 18 Miller, in the Lockport Field, flowed 1,200 bbls. initially from 4,375 feet. No. 8 Miller is being rigged to drill deeper from 4,400 feet. The strainer was set and No. 17 Miller is being bailed at 4,350 feet. A derrick is up for No. 3 Farquahar and a derrick is up for No. 4 Bayou d'Inde. No. 5 Farquahar and others-A is drilling at 5,625 feet; No. 5 Bordages is drilling at 3,750 feet; No. 1 fee-A is drilling at 3,710 feet, and No. 2 Frieberg and Wolf is drilling at 5,210 feet.

In the Edgerly Field, the Rex Petroleum Co.'s No. 5 Hunter is being rigged to drill deeper. Location has been made for Hercules Oil Co.'s No. 3 Paraffine. McDaniel & Ellis' No. 1 Ecker tested salt water at 3,505 feet and at 3,190 feet. Wilson-Broach's No. 2 Koonce, formerly No. 5 Wilson, is drilling at 3,010 feet. Plummer Oil Co.'s No. 1 Lyons is being rigged. Gulf Refining Co.'s No. 3 Robert Lincoln fee is drilling at 2,100 feet. Same company's No. 10 Higgins-B is drilling at 200 feet.

At Vinton, Marrs McLean's No. 12 Gray is a derrick. Vinton Petroleum Co.'s No. 7 Rescue is drilling at 2,960 feet, and No. 60 Gray is drilling at 2,025 feet. Gulf Refining Co.'s No. 43 Star-Vincent is drilling at 2,360 feet. In the Stark Dome area, Gulf Refining Co.'s No. 7 L. M. Lumber Co. is drilling gravel at 550 feet, and 10-inch casing has been set at 704 feet at No. 8 Industrial Lumber Co., in the same field. In the Sulphur area, Union Sulphur Co.'s No. 721 fee is standing after the 6-inch had been cemented at 3,308 feet.

Cameron Parish

In the Sweet Lake Field, the Pure Oil Co.'s No. 4 Sweet Lake is being bailed at 5,141 feet and showing a little oil and making 1,000,000 feet of gas. No. 5 Sweet Lake is shut down at 5,120 feet in sand showing oil; No. 2 is being washed to 5,100 feet, and No. 3 is being rigged up to wash the liner, total depth

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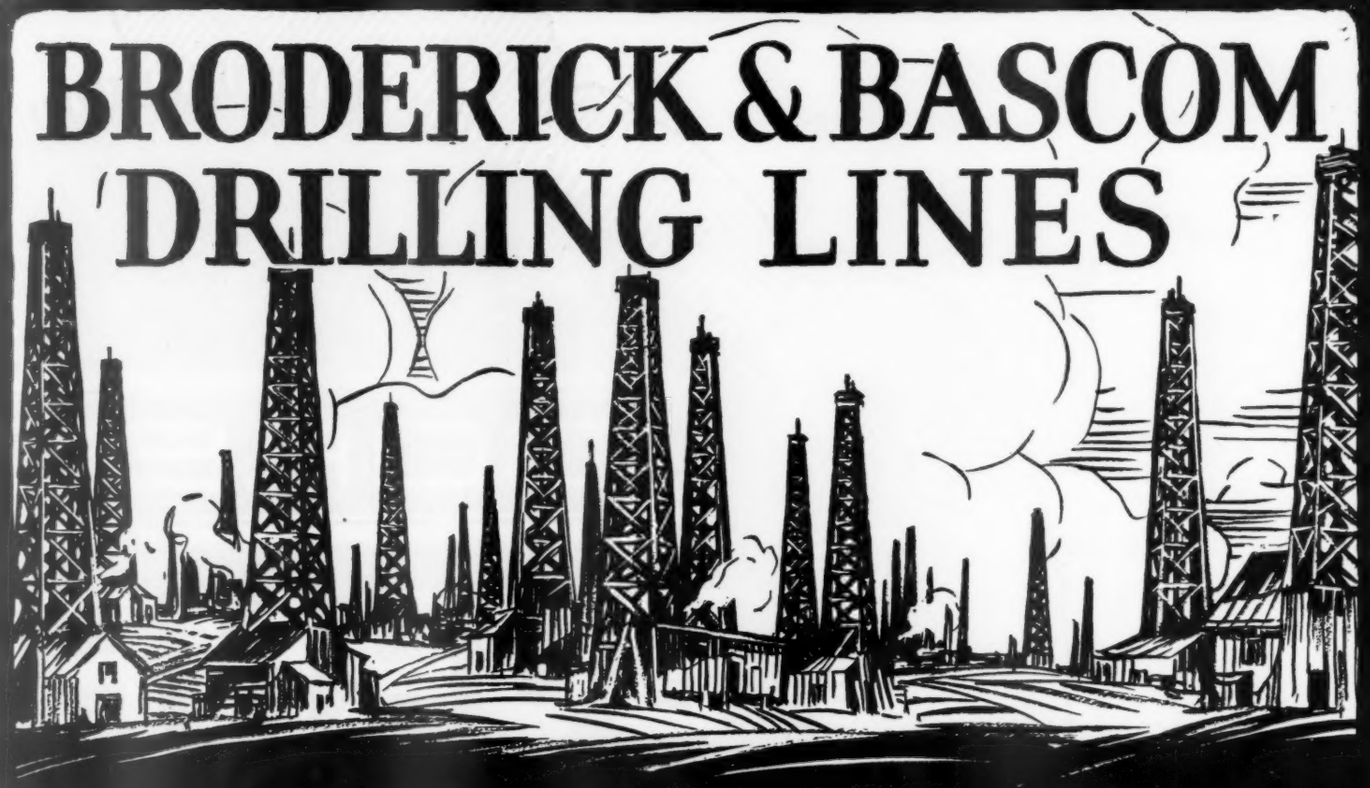

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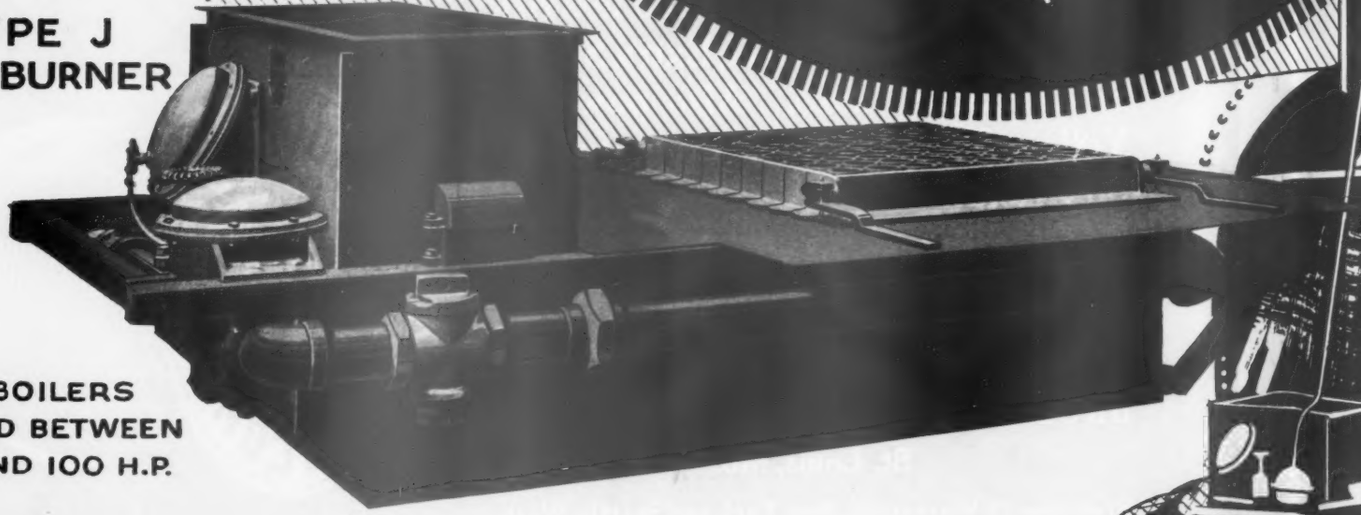

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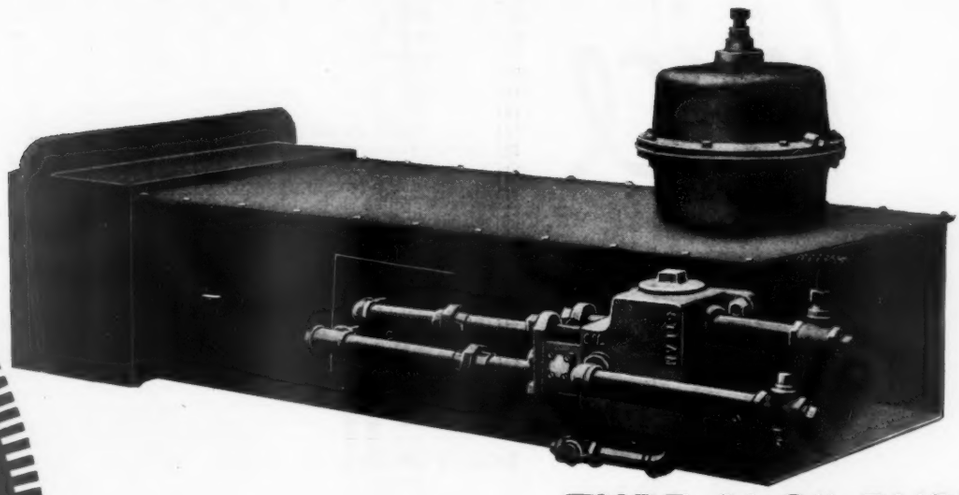

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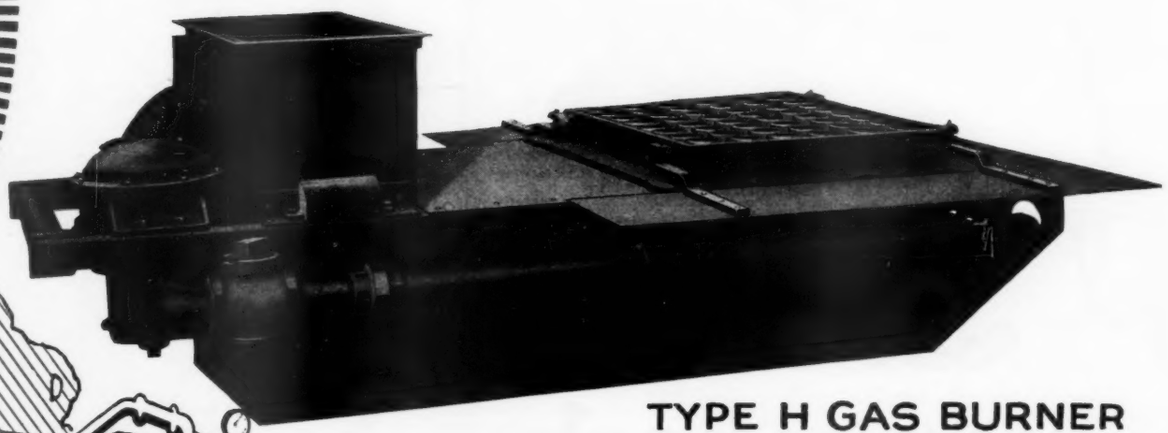

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5,879 feet. At Hackberry, the Yount Lee Oil Co.'s No. 5 State Black is drilling shale at 3,920 feet. Calcasieu Oil Co.'s No. 2 Caldwell is drilling gumbo at 1,702 feet. Border's No. 1 Mallard Bay was abandoned in sand at 3,518 feet.

Evangeline Parish

Tom Hincey and associates' No. 1 Ducide Guillory, at Pine Prairie, was spudded and shut down.

Iberia Parish

At Fausse Point, the Gulf Refining Co.'s No. 1 Broussard is drilling gumbo at 3,881 feet. Calcasieu Oil Co.'s No. 1-A Schwing is drilling shale at 3,560 feet. Gulf company's No. 3-Z State is a location.

LaFourche Parish

Gulf Refining Co.'s No. 1 Dibert-Stark, at Thibodeaux, is fighting a badly caving hole at 350 feet.

St. Mary Parish

Border's No. 1 Brand Lake is shut down in shale at 4,886 feet waiting on a geophysical report. Louisiana Exploration Co.'s No. 1 W. Cote Blanche is drilling gumbo at 2,000 feet.

ROCKY MOUNTAIN AREA

(Continued from Page 55)

company's No. 1 Lenau, NE cor. Section 33-22-27, south of Carlsbad, is drilling again and is in sand at 2,740 feet. This well may be carried to 3,500 feet as they are becoming a little more optimistic.

Artesia Field

In the Artesia Field, the Pueblo Oil Co.'s No. 2 Yates, SE Section 33-17-28, is shut down at 300 feet waiting for the 10-inch casing. Lever & Carper's No. 5 State, SW SE NW Section 3-18-28, north end of the field, is rigged and ready to commence spudding. R. D. Compton's No. 4 Mann, NW Section 4-18-27, is shut down at 210 feet. Hamilton Petroleum Co.'s No. 1 Billings, Section 13-19-26, is drilling in gray lime at 2,095 feet. Hammond and others' No. 1 Miller, SW Section 15-16-25, is drilling at 1,080 feet.

The Maljamar Oil & Gas Corp. has sold its producing property in the Artesia Field to Van S. Welch and associates for the Three Sands Oil Co. The property consists of 160 acres on which there are now 16 producing wells. These wells produced 2,360 bbls., or an average of 92 bbls. a day, during August. The property will be consolidated wi h that of Flynn, Welch & Yates and the Illinois Producers Oil Co.

B. F. Goodrich of Indianapolis, Ind., has established headquarters at Roswell and will be in charge of proposed development activities of the Torico Oil Co. His father, a former governor of Indiana, has been associated with J. S. Covert of Roswell in the above-named company. This company was organized and is being financed in Indiana. It will take over the Lea County acreage held by J. S. Covert and others, and proposes to start a test well in the near future. Covert drilled one test on the acreage in Section 15-21-33, which was abandoned last month as a dry hole at 4,434 feet. The company appears to be amply financed to undertake the putting down of a deep test.

The Ohio Oil Co.'s No. 1 Wells, Section 24-7-29, on the Jordan Ridge, in Quay County, is still fishing for underreamer lugs at a total depth of 3,720 feet. The Clovis Oil & Gas Co.'s No. 1 Hoskins, Section 24-8-24, in Curry County, is drilling in lime at 2,950 feet. McQuigg & McQuigg's No. 1 Neis, NW cor. Section 7-5s-29e, in the Olive Basin of Chaves County, has most of the material on the ground. Same interests have also entered into a contract with the Three and One Oil Co. to drill another well on the same block, both going down simultaneously. Its location is on the Ellis permit in Section 1-5s-28e. Contract calls for a 3,500-foot hole. It is understood there are more than 20,000 acres in the block.

Northeastern New Mexico

There is little of interest to report in northeastern New Mexico. In San Juan County, the Huntington Park Oil Co.'s No. 1 Terwilliger, Section 29-30-9, has rigged up a new drilling line and is going ahead at 3,515 feet in the Lewis shale. Portage Oil Co.'s No. 2 Hubbell, Section 25-31-13, is running 8¼-inch casing to bottom at 1,150 feet. The contractors, Messick & Bell, are moving a rig to Senate Oil Co.'s No. 1 Garland, Section 34-29-11, to deepen. The hole is bottomed at 1,745 feet, as deep as the lighter rig could carry it. It was showing some gas when drilling was suspended a few weeks ago. The Huerfano Oil Co.'s No. 1 Wiltbank, Section 25-29-11, is on top of a third sand at 805 feet at which depth some rainbow colors are showing. The Continental Oil Co.'s No. 17, Munoz lease, Section 2-29-19, Rattlesnake Dome, is sidetracking at 3,331 feet. Total depth of old hole is 3,785 feet. This operation, a test to the Pennsylvanian, has been held up for many months by numerous difficulties. It had about 2,500 bbls. of production from upper horizons which was shut off to make the deep test.

In McKinley County, Midwest Refining Co.'s No. 1 Hancock, Section 1-17-9, Hospah Dome, is still plugging back from a total depth of 3,282 feet. The hole was cemented at 1,598 feet. Continental Oil Co.'s No. 1 Carica, Section 9-17-7, is drilling in gray shale at 1,180 feet. The Hogback Oil Co.'s No. 1, Section 12-16-10, Voght structure, is shut down at 1,730 feet waiting for casing. S. Dysart and others' No. 1, Section 21-14-9, is drilling ahead again at 1,500 feet.

Montana

The most important development of the week in Montana was the finding of water in the sand in the Brittan DeSchon well in the new Bannatyne Field. The well is on Section 34-26-1, and has also been referred to as the Golfers Syndicate well. It is almost 5 miles from the Genou discovery well, on the northwestern slope of the structure. The sand was encountered at 1,584 feet, and proved to be about 75 feet thick, the water increasing as the bit went deeper into the sand. While a disappointment to the backers of the enterprise, the well is considered by interested parties as important, as it is thought to have definitely established the closing of the structure in that direction, as well as proving that the sand productive in the Genou wells is continuous throughout the field. The log of the well shows it to have been 134 feet lower on the structure than the Genou wells, while the log of the Elliott well on Section 1-25-1, half way between the producing wells and the Brittan location, shows that this well also is lower structurally than the first two holes drilled in the field. The Brittan well is still drilling with the Ellis-Madison contact as objective.

Practically 90,000 acres of land, covering four townships, have been leased as the result of the Genou strike in the Bannatyne district. This includes the large block of acreage taken over by the Homestake Exploration Co. near Acme siding, where a test is now drilling, and the California Petroleum-O'Neil acreage on the northwest side where a dry hole was completed two weeks ago. The Ohio Oil Co. is reported to have taken over several thousand acres on the northeast side of the structure in the past few weeks, and to be watching operations in the field closely.

Great Falls Gas Line

Pipe for the Kevin Sunburst-Great Falls gas line, totaling 120 miles in length and valued at $1,500,000, is now en route from Youngstown, Ohio. It will be delivered at various points along the right of way, and construction work will begin at once. The Great Falls Gas Co., which will operate the city distribution system, is working out its price schedules. The line will be laid by the Hope Engineering Co. of Mt. Vernon, Ohio.

The State Board of Land Commissioners of Montana last week opened bids received for the purchase of the royalty oil from state owned lands. In all, nine bids were received, offering premiums ranging from 10 to 90 cents over the posted field price for the crude. The Bluebird Oil & Refining Co. was awarded the contract for Cat Creek royalty oil at a price 90 cents above the posted price, contract to hold for three years. The Arro Oil & Refining Co. was given a

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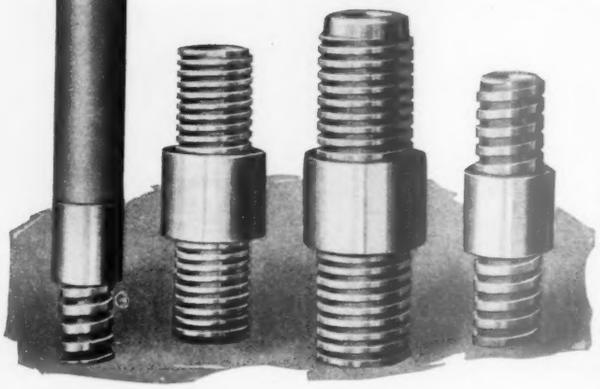

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one-year contract on the state royalty oil from the Kevin Sunburst Field at a price 12½ cents above the posted price, the Arro to take all the state oil up to and including 1,000 bbls. a day.

Wilcox Pool

The Wilcox Pool in the Kevin Sunburst Field looks better since the completion of three new producers in that area in the last week. The National Oil Co. (Radigan) well completed some weeks ago with gusher production brought this district into the lime light, but subsequent completions in that area have been disappointing until the past week. The Hannah Porter Co. brought in its No. 2 Harte on Section 7-34-1 with a production variously estimated at from 400 to 1,000 bbls. The Blue Sage Oil Co. completed a good well on Section 8 in the same pool, and the Dakota Montana Oil Co. brought in a 100-bbl. well on Section 7-34-1.

The Ohio Oil Co. reports a 26-bbl. production in its No. 3 Schact on Section 33-35-2, and the California Co.'s No. 8 Newman on Section 22 in the same township is reported pumping. The California's No. 1 Shaver on Section 11-34-2 has been abandoned after showing for a 20-bbl. well, it having proved impossible to control the water which broke in. Two gas flows above the Ellis were reported from the Meows well on Section 12-34-2.

The Maser well on the east side of the Cat Creek Field will be deepened from its present depth of 2,200 feet. Drilling was suspended at this level last summer. The completion of a 40-bbl. well by Walker Brothers on the east side of the field last week has stimulated interest in the Cat Creek operation, where there has been almost no drilling for sveral years. It is expected that considerable development work will be done in that district in the spring.

E. H. Rosenberg of Los Angeles is reported to have taken over leases of the Montana Pacific Oil Co. on the Porcupine Dome. These leases were originally the property of the Stellar Oil Co., which drilled a number of holes with some showings of production. The Stellar wells averaged about 2,200 feet in depth, and it is understood that Rosenburg will drill a test to 3,000 feet or more.

Montana Wildcats

Reports from Montana wildcats are rather interesting this week. The Arnold well on the Bow and Arrow Dome, 20 miles east of Sweetgrass, reports heavy gas flows in the upper sands. Well is now drilling below 1,200 feet and will be carried to 2,500. The Frazer well on the Bears Den structure, Section 31-37-6, reports free oil showings at 400 feet. The first possible productive sand expected is in the Colorado series at between 1,500 and 1,600 feet. The Book well on the Black Butte Dome is thought to be less than 100 feet off the first Cat Creek sand. Not so promising is the report from the Prairie Oil & Gas Co.'s well on Section 23-3-21, Little Basin, which will probably be abandoned at 2,740 feet.

ROCKY MOUNTAIN PRODUCTION
Runs From the Fields

Wyoming	
Salt Creek	36,770
Teapot	1,190
Big Muddy	2,990
Grass Creek	2,620
Elk Basin	1,060
Greybull	20
Dutton Creek	20
Notches	200
Rock River	2,570
Rex Lake	150
Lance Creek	660
LaBarge	480
Mule Creek	740
Poison Spider	800
Hamilton	2,010
Osage	330
Lander	650
Pilot Butte	570
Ferris	70
Byron	60
Lost Soldier	2,640
Simpson Ridge	90
Montana	
Cat Creek	2,060
Lake Basin	230
Kevin Sunburst	11,500
Colorado	
Florence	940
Moffat	1,645
Fort Collins	2,954
Walden	50
Iles Dome	460
Rangely	100
Tow Creek	685
Boulder	25
New Mexico	
Rattlesnake	129
Hogback	240
Cap Rock	103
Artesia	1,436
Total	79,247

SAFETY DIRECTORS HOLD ANNUAL MEET

(Continued from Page 79)

quency rate of two of them increased and the remaining one was the same for both years. The total for the seven stations shows in 1926 a frequency rate of 45.04, and in 1927, 30.72, or an improvement of 32 per cent.

"We have not yet adopted a policy of discharging a man for his accident record, unless it is an extreme case, preferring rather to impress upon him the importance of safety and to try to make a better man of him. We believe that if a man gets off on the wrong foot it is better to spend some time and energy in trying to get him straightened out rather than to replace him with a new and inexperienced man."

Boyd V. Osborn, safety director for the Standard Oil Co. of Indiana, emphasized Mr. Nicholson's remark that safety work must be led by men at the head of the organization by saying:

"Success in any phase of safety work depends entirely upon the ability to secure co-operation from every department, and the wholehearted support of every employe, whether he be superintendent, foreman or laborer. I named them in that order for the reason that in my opinion the man at the top is the key to the ultimate success of the plan. Likewise the importance of their position in safety work and accident prevention depends greatly upon the importance of their regular position on the job."

In explaining the method of getting safety ideas before the men in the company's plants Mr. Osborn said:

"Some safety committees are in the habit of making weekly or monthly plant inspections and others are taught to keep on the alert always to learn of dangerous conditions or unsafe practices. In our organization both methods are used with success. Safety committeemen see conditions that need attention and they are corrected frequently before the safety director learns of their existence. Most of the small jobs of safety work are nothing more nor less than regular repairs that should be made anyway regardless of the safety factor, and are treated as such. As I stated before, we are attempting to educate our men and foremen to the point where they will recognize safety as a part of their regular daily duties.

"Formalities should be almost entirely dispensed with. Many employes become embarrassed with formalities and red tape. They must feel perfectly at ease and free from restraint so that suggestions may be made without fear of adverse criticism or prejudice. It has been our experience that monthly meetings give better satisfaction than having them either quarterly or semiannually, for the reason that they are kept more alert with frequent meetings."

Statement of the Ownership, Management, Etc., of
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News Editor: Andrew M. Rowley, Tulsa, Okla.

Stockholders holding 1 per cent or more of total amount of stock: The Patrick C. Boyle Estate, Oil City, Pa., Robert W. Egan, Tulsa, Okla.

Known bondholders, mortgagees and other security holders, holding 1 per cent or more of the total amount of bonds, mortgages or other securities: None.

W. T. BRYAN,
Treasurer.

Sworn to and subscribed before me this 30 day of September, 1927.

CORA MAE MAXFIELD,
Notary Public.

My commission expires May 15, 1930.

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 38)

W. W. Donnelly & Young's No. 1 Massey, Sec. 29, Blk. U-V ..... Shut down 100 ft.

W. W. Donnelly, Young, Logan & Hult's No. 1 Pierce, C SW Sec. 150, Blk. O, G. H. & S. A. Sur., elev. 2,105 ft. ..... Rainbow show 454 and 540 ft.; drilling 2,860 ft., dark shale.

P. H. Williams' No. 2 L. P. Powell ..... Pay 2,604-27 ft., 250 ft. oil in hole; premature shot parted casing.

McManmon Oil Co.'s No. 1 Blakeney ..... Drilling 900 ft.

World Oil Co.'s No. 1 Schneeman-B ..... Fishing tools 400 ft.

World Oil Co.'s No. 1 Powell, Sec. 52, Blk. BB, G. C. & S. F. Sur. ..... Location

Young & Donnelly's No. 1 J. M. Shannon, C Sec. 11, Blk 9, D. & S. E. Sur. ..... Spudded and shut down.

CULBERSON COUNTY

James H. Gardner et al's No. 1 Radford, C SE Sec. 29, Blk. 62, Public School Land Sur. ..... Shut down at 585 ft. for 10-in. casing.

Scott & Dittman's No. 1 Miller, SW cor. NW NE Sec. 1, School Blk. 97 ..... Spudded and shut down.

DAWSON COUNTY

R. R. Penn's No. 1 Wright, elev. 2,842 ft. ..... Top salt 1,750 ft.; set 8-in. 2,449 ft.; drilling 3,810 ft.

ECTOR COUNTY

J. S. Cosden, Inc., et al's No. 2 Connell-A, NW cor. NE Sec. 13, B-16, School Land, elev. 2,844 ft. ..... Top pay 3,471 ft.; shut down 3,515 ft.

J. S. Cosden et al's No. 3 G. W. Connell-A, SE cor. NE Sec. 13, Blk. B-16. Elev. 2,849 ft. ..... Top pay 3,499 ft.; shut down 3,545 ft.

FISHER COUNTY

Hucony Gas Co. & Marland Oil Co.'s No. 1 Langford .... Hole full water 3,280 ft.; total depth 3,380 ft.; shut down.

Ideal Oil Co.'s No. 1 Jameson, C SE Sec. 111, Blk. 1, H. & T. C. Sur. ..... Hole full salt water 2,345-2,520 ft.; shut down 3,304 ft.

Marland Oil Co. and Texon's No. 1 McCall, Sec. 108, Blk. 3, H. & T. C. Sur. ..... Rig.

Miley Oil Corp. and Marland Oil Co.'s No. 1 W. W. Ammons, Sec. 198, Blk. 3, H. & T. C. Sur. ..... Hole full sulphur water at 3,665 ft.; underreaming 6-in.

R. W. Raney's No. 2 Maberry, Sec. 56, Blk. 1, T. & P. Sur. ..... Shut down for orders 2,725 ft.

Sinclair Oil & Gas Co.'s (was Bourdon Royalty Co.'s) No. 1 J. A. Danise, Sec. 6, Blk. K, T. & P. Sur. ..... Hole full water 2,830 ft.; show oil and hole full water 3,075-77 ft. in sandy lime; cleaning out.

The Texas Company's No. 1 D. S. Stevens, C SW SE SE Sec. 79, Blk. 1, H. & T. C. Sur. ..... 8-in. froze 2,302 ft.; shut down.

GAINES COUNTY

Westheimer & Daube's No. 1 Birge & Forbes Land Co., Sec. 308, Terrell County School Land. ..... Cemented 8-in. 3,900 ft.; drilling 4,100 ft.

GARZA COUNTY

Emerald Oil Co.'s No. 1 D. Boren, NW cor. NE Sec. 137, Blk. 5, H. & G. N. Sur. ..... Small show oil in gray lime 1,884-1,902 ft.; shut down 2,600 ft.; show oil and hole full water 2,420-60 ft.

GLASSCOCK COUNTY

California Co.'s No. 1 W. B. Currie, Sec. 215, Blk. 29, elev. 2,540 ft. ..... Water sand 1,085-90 ft.; shut down 2,523 ft.; will probably plug.

Green et al's No. 1 F. G. Oxsheer, Sec. 6, Blk. 34, T. & P. Sur., elev. 2,540 ft. ..... Shut down for orders 3,661 ft.; hole full sulphur water.

World Oil Co. and J. S. Meriwether's No. 1 L. S. McDowell, C SW Sec. 43, Blk. 34, Twp. 2-S, T. & P. Sur., elev. 2,553 ft. ..... Top salt 1,180 ft.; hole full sulphur water 3,225-35 ft.; drilling 3,660 ft.

HOWARD COUNTY

California Co.'s No. 1 Fisher Brothers, SE SW NW Sec. 36, Blk. 33, T. & P. Sur. T-1-S ..... Shows oil 1,530-48 ft. and 1,562-64 ft.; drilling 1,670 ft.

Sweeney et al's (was Fred Carey et al's) No. 2 G. O. Chalk, SE NW Sec. 124, Blk. 29 ..... Drilling 1,560 ft.

W. W. Donnelly et al's No. 1 Martin, SE cor. Sec. 41, Blk. 33, T-2 N, T. & P. Sur., elev. 2,552 ft. ..... Fishing tools 2,840 ft.

Henshaw et al's No. 1 S. T. Eason, Sec. 6, Blk. 32, T. & P. Sur., T-2-S ..... Show oil 1,340-54 ft.; shot 40 qts.; another show in sandy lime at 1,720-1,805 ft.; shot 60 qts. 1,720-50 ft., no results; T. D. 1,925 ft.; shut down.

Henshaw et al's No. 1 W. R. Settles ..... Total depth 1,234 ft.; rigging machine.

Marland Oil Co. and Zoch's No. 1 Jones, Sec. 32, Blk. 27, T. & P. Sur., elev. 2,218 ft. ..... Shut down 500 ft.

Marland Oil Co.'s No. 1 A. M. Fisher, Sec. 1, Blk. 33, T. & P. Sur., T-2-S, elev. 2,730 ft. ..... Sulphur water 3,315-25 ft.; drilling 3,380 ft.

Marland Oil Co.'s No. 1-A Guitar Trust Est. ..... Top salt 1,215 ft.; drilling 1,945 ft.

Marland Oil Co.'s No. 1 A. G. Haines, C SE Sec. 20, Blk. 32, T. & P. Sur., T-1-N ..... Top salt 1,145 ft.; top lime 2,860 ft.; running 8-in. 3,010 ft.

Marland and Texon's No. 3 Settles, C SW Sec. 134, Blk. 29, W. & N. W. Sur. ..... New location; rigging up.

Mays, Nixon & Flowers' No. 1 W. J. Flowers ..... Rotary rig.

Peer Oil Corp.'s No. 1 Read, C NW Sec. 39, Blk. 30, T. & P. Sur., T-1-N ..... Drilling 650 ft.

Texon O. & L. Co. and Marland Oil Co.'s No. 1 Mrs. Connaly ..... Total depth 1,060 ft.; underreaming 12-in.

Texon O. & L. Co. and Marland Oil Co.'s No. 1 Mabel O. Quinn ..... Top lime 3,215 ft.; small show oil 3,345-65 and 3,370-80 ft.; preparing to abandon 3,855 ft.

HUDSPETH COUNTY

Lockhart Brothers' No. 1 Gardner & Moseley, C SE Sec. 5, School Blk. 21 ..... Shut down 262 ft.

Lockhart & Co.'s No. 1 Moore, C SE Sec. 16, Blk. 71, T. & P. Sur. T-6 ..... Spudding.

Lockhart & Co.'s No. 1 Gardner & Mosely ..... New location; rigging up.

IRION COUNTY

Cash Dollar et al's No. 1 G. J. Bird, NE Sec. 16, Blk. 10, S. P. R. R. Sur. ..... Shut down 2,500 ft.

JEFF DAVIS COUNTY

J. K. Hughes Dev. Co.'s No. 2 Means ..... Total depth 1,250 ft.; underreaming 12-in.

Humble O. & R. Co.'s No. 2 Crecencio Flores, 1,130 ft. N and 850 ft. E of SW cor. Sec. 34, Blk. 58, T. & P. Sur., Twp. 8 ..... Drilling 1,280 ft.

JONES COUNTY

Gibson & Johnson's (was Cole & Hart's) No. 1 Joe Dillard, NW cor. Sec. 2, Blk. 17, T. & P. Sur. ..... Hole full water 1,505-40 ft.; set 10-in. 1,545 ft.; drilling 1,900 ft.

Midwest Exploration Co.'s (was Campbell et al's) No. 1 L. H. Herndon, Sec. 6, M. E. P. & P. Sur., elev. 1,832 ft. ..... Top pay 2,498 ft.; deepening to 2,524 ft.; swabbed 115 bbls.; shut down for orders 3,009 ft.

Garland & Diamond's No. 1 E. D. Glynn, SE cor. Sec. 18, Deaf & Dumb Asylum Lands ..... Seven bailers salt water per hour at 1,465-1,500 ft.; hole full water 1,900-07 ft.; drilling 2,140 ft.

Hutson & Weaver's No. 1-A Smith, Sec. 51, Blk. 18, T. & P. Sur. ..... Shut down 800 ft.

Marston Oil Co.'s No. 1 E. Howell, NW cor. SE W ½ of N 400 acres, Sec. 20, Blk. 19, T. & P. Sur. ..... Small show oil 2,496 ft.; shut down 2,545 ft.

Marston Oil Co.'s No. 1 J. S. Swan, Robert Spears Sur. No. 280 ..... Hole full salt water 2,390-2,400 ft. and 2,435 ft.; hole full salt water 3,015-20 ft.; shut down 3,503 ft.

Phillips Petroleum Co.'s No. 2 J. C. Mason ..... Rigging cable tools.

W. G. Stough and others' No. 1 J. P. Willis, J. C. Patterson Sur. No. 2 ..... Fishing tools 1,740 ft.

Stebbins Oil Co.'s No. 2 Higgs, SE cor. Sec. 30, W. T. Scott Sur. ..... Location.

Stebbins O'l Co.'s No. 1 Scott ..... Rigging up cable tools.

Swensondale Oil Co.'s No. 1 Caton, SW NW Sec. 9, Deaf & Dumb Asylum Lands ..... Shut down 2,505 ft.

KENT COUNTY

Marland Oil Co. and Texon O. & L. Co.'s No. 1 Bilby, Sec. 41, Blk. K, Thompson Sur. ..... Location.

KNOX COUNTY

Clark et al's No. 1 Atkins ..... Drilling 1,140 ft.

Fain-McGaha Oil Corp. et al's No. 1 Mathews ..... Cleaning out at 2,360 ft., crooked hole.

Humble and Navarro Oil Co.'s No. 1 McAdams ..... Preparing to abandon as dry at 4,192 ft.

The Texas Company's No. 1 Watkins ..... Setting 8-in. 2,428 ft.; testing; total depth 2,436 ft.

Deep Rock Oil Co.'s No. 1 Moore ..... Spudding.

Deep Rock Oil Co.'s No. 1 Beavers, CSL Sec. 224, Blk. 44, elev. 1,441 ft. ..... Running 5-in. 3,030 ft.

Deep Rock Oil Co.'s No. 1 Big Four, 1,270 ft. S and 2,590 ft. W of NE cor. Sec. 31, Blk. 4 ..... Drilling 2,240 ft.

Humble O. & R. Co.'s No. 1 Goode, 1,940 ft. S and 200 ft. W of NE cor. Sec. 7, H. T. & B. Sur. ..... Hole full water 1,710-15 ft., and 2,760-2,800 ft.; preparing to abandon at 4,543 ft.

The Texas Company's No. 1 J. O. Bowden, Sec. 115, Blk. 45, H. & T. C. Sur. ..... Lime 1,240-45 ft.; estimated 100,000 ft. gas; hole full water 1,835 ft.; shut down 2,250 ft.

The Texas Company's No 1 Teague ..... Preparing to plug; hole water at 3,705 ft.

LOVING COUNTY

Owens & Sloan's No. 1 W. D. Johnson, C SE Sec. 20, Blk. 53, T-2, T. & P. Sur., elev. 2,934 ft. ..... Shut down 1,020 ft.; in litigation.

LYNN COUNTY

Elpo Oil Co.'s No. 1 Nevols, NW cor. Sec. 6, Blk. C-42, School lands ..... Rotary; drilling 320 ft.

The Hart Oil Corp.'s No. 1 C. O. Edwards, NW NW Sec. 5, Blk. 2, L. & S. V. Sur. ..... Shut down 1,400 ft.

MIDLAND COUNTY

Orbit Oil Co.'s No. 1 Moreland, C SE Sec. 17, Blk. 39, T. & P. Sur. T-1-S ..... Shut down 185 ft.

MITCHELL COUNTY

Robert Thraves' No. 1 C. Way, Sec. 91, Blk. 27, T. & P. Sur. T-1-N ..... Total depth 2,508 ft.; fishing tools.

B. E. Walter et al's No. 1 J. E. Dollen, NW cor. SW Sec. 11, Blk. 27, T. & P. Sur. ..... Shut down 2,955 ft.; hole full sulphur water.

NOLAN COUNTY

J. H. Winemiller Corp.'s (was Peters et al's) No. 1 Booth, Sec. 90, Blk. 21, T. & P. Sur. ..... Shut down for orders at 3,212 ft., contract depth.

Herbert Oil Co.'s (was McClesky and others') No. 1 Pepper, SE cor. SW Sec. 29, Blk. 22, T. & P. Sur. .... Rigged up and shut down.

Zweifel and others' No. 1 Longbotham, C SE Sec. 130, Blk. 1, H. & G. N. Sur. ..... Repairing rig 3,575 ft.

PECOS COUNTY

George Anderson et al's No. 1 McKenzie, C SE N half Sec. 6, Blk. 604 ..... Top salt 1,010 ft.; drilling 1,630 ft.

George Anderson's No. 1 Sherbine Brothers ..... Rig on ground.

Allsman & Bell's No. 3 Pecos River bed ..... Driving pilings.

Benedum & Trees' No. 1 J. C. Trees, C NW SE SE Sec. 30, Blk. 7, H. & G. Sur., elev. 2,556 ft. ..... Flowed sulphur water 3,250 ft., shut down 3,460 ft.

Buell et al's No. 1 Batchelor, C N ½ NE Sec. 89, Blk. OW, G. C. & S. F. Sur., elev. 3,188 ft. ..... Show oil 1,700 ft.; flowed sulphur water 1,775 ft. and 2,800 ft.; shut down 2,820 ft.

Buell & Hagan's No. 1 Jasper, 1 mi. S and W NE cor. Jasper Co. School Land No. 104, Elev. 3,307 ft. .... Top salt 1,527 ft.; drilling 2,700 ft.

California Co.'s No. 2 Yates, Sec. 34, Blk. 194, Elev. 2,502 ft. ..... Rig.

California Co.'s No. 3 Yates, Sec. 34, Blk. 194, Elev. 2,502 ft. ..... Total depth 1,060 ft.; will run casing; 60 ft. oil.

California Co.'s No. 4 Yates, Sec. 34, Blk. 194 ..... Drilling 815 ft.

California Co.'s No. 5 Yates, Sec. 34, Blk. 194 ..... Drilling 370 ft.

California Co.'s No. 1 M. A. Smith, NE cor. Sec. 35, Blk. 194, Elev. 2,544 ft. ..... Cemented 6-in. 1,250 ft.; shut down.

California Co.'s No. 2 M. A. Smith ..... Drilling 755 ft.

Douglas Oil Co.'s No. 1 J. T. Sellman ..... Fighting cave 460 ft.

Day Bros. & McKnight's No. 1 Yates, NW cor. Sec. 58, Blk. 1 ..... Location.

M. Z. Dibble & Hale's No. 1 Bonebrake, Sec. 115, Blk. 8, H. & G. W. Sur. Elev. 2,555 ft. ..... Drilling 610 ft.

Bob Elmore's No. 1 M. Holmes, Sec. 642, Blk. 1, I. & G. N. Sur., elev. 2,176 ft. ..... Top salt 335 ft.; slight show oil and 2 bailers sulphur water 1,500 ft.; small show gas at 1,515 ft.; drilling 1,886 ft.

Garland & Mott's No. 1 El Paso Cattle Loan Co., C NE Sec. 26, Blk. 126, T. & S. L. Sur., elev. 3,267 ft. .... Hole full sulphur water 2,560 ft.; drilling 2,830 ft.

George A. Henshaw et al's No. 1 B. T. Corder, cen. SW Sec. 74, Blk. 2, C. C. S. D. Sur. ..... Location.

George A. Henshaw, Jr., No. 1 Snyder, Sec. 29, Blk. 144, T. & St. L. Sur. Elv. 2,730 ft. ..... Junked hole 440 ft.; skidding.

Humble O. & R. Co.'s No. 1 M. A. Smith, NE cor. Sec. 36, Blk. 194, G. C. & S. F. Sur. Elev. 2,727 ft. ..... Top pay 1,425 ft.; flowing 10 bbls. every 2½ hours at 1,504 ft.

Kirby Oil Co.'s No. 1 W. W. Turney, NW cor SW Sec. 11, Blk. 140, T. & St. L. Sur. ..... Drilling 260 ft.

Mazda Oil Co. and Savoy Oil Co.'s No. 1 Smith, Sec. 24, Blk. 194, G. C. & S. F. Sur. ..... Shut down for casing 1,434 ft.

Mazda Oil Co. and Savoy Oil Co.'s No. 2 Smith, Sec. 24, Blk. 194, G. C. & S. F. Sur. ..... Location.

McMan and Marland's No. 2 I. G. Yates Elev. 2,520 ft. .... Top pay 1,112 ft.; flowing 11 bbls. per hour 1,120-33 ft.

McMan and Marland's No. 3 I. G. Yates. Elev. 2,536 ft. .... Top pay 1,235 ft.; flowing 65 bbls. per hour at 1,358 ft.

McMan and Marland's No. 4 I. G. Yates. Elev. 2,578 ft. .... Top pay 1,290 ft.; flowing 40 bbls. per hour at 1,355 ft.

McMan and Marland's No. 5 I. G. Yates. Elev. 2,826 ft. .... Drilling 1,370 ft.

McMan and Marland's No. 6 I. G. Yates. Elev. 2,770 ft. .... Underreaming 10-in. 685 ft.

Mid-Kansas and Transcontinental Oil Co.'s No. 2 Smith-Taylor ..... Total depth 1,153 ft.; cementing 6-in.

Mid-Kansas and Transcontinental's No. 3 Smith-Taylor, Sec. 33, Blk. 194 ..... Building road.

Mid-Kansas and Transcontinental's No. 1 Mrs. M. A. Smith ..... Drilling 545 ft.

Mid-Kansas and Transcontinental's No. 4 Yates-B ..... Location.

Mid-Kansas and Transcontinental's No. 8 Yates-A ..... Drilling 440 ft.

Mid-Kansas and Transcontinental's No. 1 Yates-D ..... Spudding 100 ft.

Moody Oil Corp.'s No. 1 B. T. Corder, cen. SW Sec. 77, Blk. 2, C. C. S. D. Sur. ..... Location.

Olean Petroleum Co.'s No. 1 G. N. Harral, CSW Sec. 82, Blk. R-3, G. C. & S. F. Sur. Elev. 3,005 ft. ..... Drilling 1,160 ft.

Quinby Oil Co.'s No. 1 Townsite, Sec. 1, Blk. 267, Client Addition Sur. Fort Stockton, elev. 2,980 ft. ..... Shut down 3,440 ft.

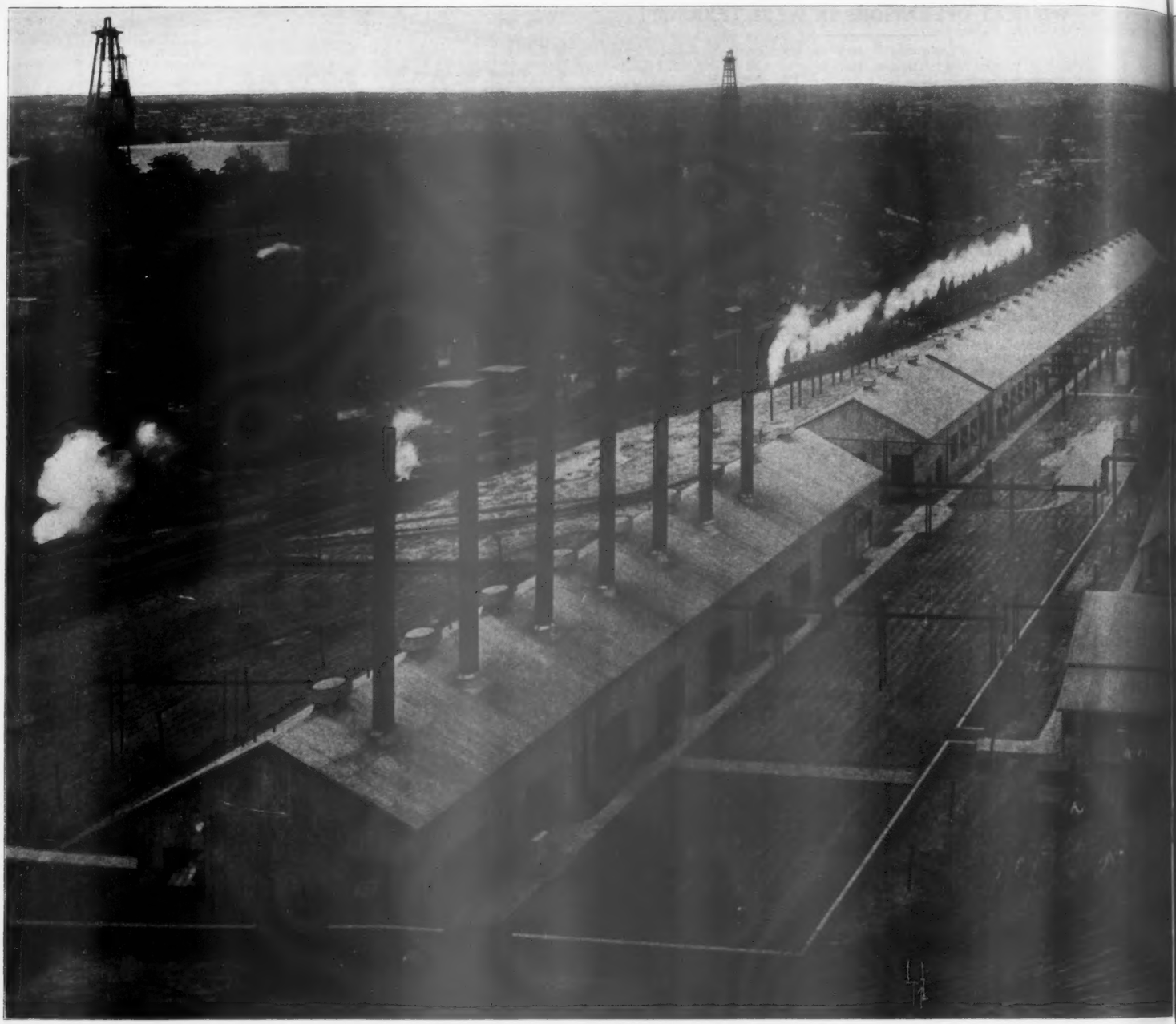
Quinby Oil Co.'s No. 2 Bennet, C NW 592, Blk. 105, G. C. & S. F. Sur., elev. 2,560 ft. ..... Shut down 1,457 ft.

Quinby Oil Co.'s No. 1 A. A. Gray, 660 ft. N and 1,320 ft. E. SW cor. Sec. 593, Abst. 3,009, Elev. 2,551 ft. .. Shut down 700 ft.

Red Bank Oil Co.'s No. 2 M. A. Smith, Sec. 24, Blk. 194 (330 ft. S of No. 1) ..... Rigging up.

Roxana Petroleum Corp.'s No. 1 Smith-A, Sec. 27, Blk. 194 ..... Total depth 1,432 ft.; cementing 8-in.

Roxana Petroleum Co.'s No. 1 J. H. Tippett, Sec. 102, Blk. 194 Elev. 2,628 ft. ..... Top pay 1,352 ft.; flowing 25 bbls. hourly at 1,361 ft.



Another of Sinclair's in Seminole Equipped

The photograph shows Sinclair Oil & Gas Company's Gasoline Plant No. 12 in the Seminole Pool. For overall efficiency it is doubtful if there is a more modern plant in the country. The main compressor building contains eighteen Cooper Type-80, 170 B.H.P. four-cycle gas engines.

THE C. & G. COOPER COMP

1111 Magnolia Bldg., Dallas **649 S. Olive St.,**

Modern Gasoline Plants with Cooper Engines

It is such plants as this which have made the demand for four-cycle Cooper engines surpass every previous record. Just remember that Cooper engines will do for you what they are already doing for many of the most progressive oil and gas companies. Meantime Cooper production and servicing facilities are being safely expanded to meet the growing demand.

ANY, MOUNT VERNON, OHIO

Los Angeles 604 Kennedy Bldg., Tulsa

W. R. Shankel et al's No. 1 I. G. Yates, CSL SW SE SE Sec. 58, Blk. 1, I. & G. N. Sur., elev. 2,320 ft. — Top salt 425 ft.; 40 ft. oil 1,313 ft.; sulphur water 1,473-79 ft.; water plugged off; shut down.

Simms Oil Co.'s No. 1 M. A. Smith, SW cor. Sec. 103, Blk. 194. Elev. 2,596 ft. — Show oil 1,276 ft.; flowed 2,530 bbls. in 21 hours 1,340-85 ft.

Transcontinental Oil Co.'s No. 1 Blackstone & Slaughter, Sec. 29, Blk. 129, P. St. L. Sur. Elev. 3,539 ft. — 250 ft. sulphur water in black sand 1,150-80 ft.; drilling 1,220 ft.

World Oil Co.'s No. 1 Kloh, Sec. 47, Blk. 48, Township 8, T. P. R. R. Sur. Elev. 2,810 ft. — Rig on ground.

World Oil Co.'s No. 1 Serf, SW cor. NE Sec. 10, Blk. 130, T. & St. L., elev. 3,245 ft. — Location.

PRESIDIO COUNTY

Headlock & Miller's No. 1 Tootle est., Sec. 123, Blk. 2, D. & P. Sur., elev. 2,912 ft. — Salt water 2,610 ft.; running 5-in. at 2,855 ft.; total depth 2,910 ft.; fishing for tools.

Pinto Canyon Oil Co.'s No. 1 Fields, 1,760 ft. S & E NW cor. Sec. 74, Blk. 2, D. & P. Sur. — Location.

REAGAN COUNTY

Henshaw & Camp's No. 1 University, Sec. 14, Blk. 49, University Land, elev. 2,772 ft. — Rerunning 10-in. 602 ft.

Texon O. & L. Co.'s No. 1-B University, Group 1 — Top pay 6,284 ft.; shut down for motor 6,590 ft. with 2,800 ft. of 38.7 gravity oil in hole.

Mariand Oil Co.'s No. 1 University-Anderson, Sec. 19, Blk. 58, University Land — Location.

REEVES COUNTY

Exploration Co.'s No. 1 A. A. Kinney, 1,500 ft. W. of NE cor. Sec. 26, Blk. C-18, Public School Land. Elev. 2,847 ft. — Shut down for 15-in., 325 ft.

David R. Thompson's No. 1 A. A. Eddins — Underreaming 10-in., total depth 1,322 ft.

World Oil Co.'s No. 1 Biggs, C SE Sec. 65, Blk. 113, Public School Land Sur., elev. 3,068 ft. — Shut down 1,610 ft.; tools moved to No. 1 Duff.

World Oil Co.'s No. 1 Duff, elev. 2,753 ft. — Top Delaware lime 4,185 ft., shut down for orders 4,189 ft.

RUNNELS COUNTY

Lou Ladd & C. E. Sillix et al's No. 1 R. M. McMillan — Top pay 2,545 ft.; pumped 200 bbls. first 24 hours; 157 bbls. second 18 hours.

Kennedy et al's No. 1 J. E. Tally — Rigging up cable tools.

Miles Oil Co.'s No. 1 L. S. Lawhon, NE cor. Sec. 68, Noble O. & G. Co.'s No. 1 Sims, Sec. 12, J. J. McHenry Sur. — Drilling 775 ft.

Swensondale Oil Co.'s No. 1 E. A. Werner — Drilling 2,180 ft.

Owenwood Oil Corp.'s No. 1 H. B. Fowler — Rigging cable tools.

SCHLEICHER COUNTY

Beavers & Leath et al's No. 1 J. A. and W. T. Whitten, C NW Sec. 35, Blk. 11, T. O. Sur. — Location.

Thomas Grey et al's No. 1 Ball Robinson, C NW Sec. 25, Blk. M, G. H. & S. A. Sur. — Shut down 400 ft.

STERLING COUNTY

Orr et al's No. 1 Neal Reed, CNL Sec. 15, Blk. 30, W. & N. W. Sur. — Sulphur water 2,125 ft.; hole full water 2,160-80 ft.; drilling 2,725 ft., sandy shale.

STONEWALL COUNTY

Peer Oil Corp. and Producers Oil Co.'s (was J. P. Johnson's) No. 1 R. P. Morrow — Shut down 1,390 ft.

TAYLOR COUNTY

A. J. Brown et al's No. 1 Hensley, NE cor. Sec. 5, Blk. 4, S. P. R. R. Sur. — Shut down for 8-in. 2,500 ft.

Dorning & Perrine's No. 1 J. A. Hammer, C N 100 acres, Sec. 23, Blk. 19, T. & P. Sur., elev. 1,904 ft. — Running 8-in. 2,165 ft.

Gilbert Johnson's No. 1 C. M. Brown, Sec. 1, Blk. 6, T. & P. Sur. — Shut down 455 ft.

Owen & Sloan's No. 1 Lattimer, Sec. 14, Blk. 9, T. & P. Sur. — Spudded and shut down.

Rosser & Pendleton's No. 1 Sam Hutman, C W ½ NW Sec. 64, Blk. 5, T. & P. Sur. — Fishing 2,605 ft.

TERRY COUNTY

Kingsland Oil & Potash Co.'s No. 1 Brownsfield, C NW SW SW Sec. 7, Blk. 1-A, E. L. R. R. Sur. — Water sand 2,322 ft.; drilling 2,560 ft.

TOM GREEN COUNTY

George Amery's No. 1 Wilkey, C SW Sec. 3, B. A. L. Sur. — Slight show gas 2,220 ft.; shut down 3,025 ft. for repairs.

Cox et al's No. 1 Llano — Location.

Fitzgerald et al's No. 1 Bennett — Drilling 300 ft.

Tulsa Oil Co.'s No. 1 Adams, C SW Sec. 162, Blk. 11, S. P. R. R. Sur. — Shut down for casing 1,250 ft.

UPTON COUNTY

Mark Curtis et al's (was Hultz et al's) No. 2 Giddings, 5,336 ft. S and 6,678 ft. E of NW cor. Throckmorton Co. School Land, League 1. Elev. 2,757 ft. — Shut down 735 ft.

J. M. Hickey's No. 1 W. I. Gormley, 1,650 ft. from SW and SE lines Sec. 7, Blk. 36, H. & T. C. Sur. Elev. 2,374 ft. — Drilling.

Texas Co. & Cordova Union's No. 1 Union Land, Sec. 23, Blk. 35, H. & T. C. — Top salt 472 ft.; set 5-in. 1,775 ft.; small show gas; drilling 2,005 ft.

R. H. Paxton's No. 1 J. T. Lane, Sec. 3, G. C. & S. F. on Orient right of way — Location.

Wise & Jackson's No. 1 J. H. Porter, SW cor. SW SW Sec. 184, Blk. E. Elev. 2,592 ft. — Building rig.

VAL VERDE COUNTY

A. Blume et al's No. 1 Moore est., Sec. 183, J. Mitchell Sur., elev 953 ft. — Top salt 1,370 ft.; top lime 3,379 ft.; top pay 3,419 ft.; total depth 3,517 ft.; shot 150 qts. at 3,414-3,508 ft.; 300 ft. oil in hole before shot; now 900 ft. sulphur water and 300 ft. oil; shut down.

Curso Williams' No. 1 Holman, NE NE Sec. 5, Blk. N, G. H. & S. A. Sur. — Shut down 3,000 ft.

Douglas Oil Co.'s No. 1 Sellars, C SE Sec. 82, Blk. A, I. & G. N. Sur. — Shut down 2,940 ft.

East Del Rio Oil Co.'s No. 1 Russell, SE cor. Sec. 183, Del Rio Town Sur. Elev. 941 ft. — Drilling 3,150 ft.

Magnolia Petroleum Co.'s No. 1 Whitehead, Sec. 61, D. G. C. & S. F. Sur., elev. 1,770 ft. — Total depth 3,190 ft.; cleaning out.

Independent Operators' No. 1 Whitehead, SE SE Sec. 30, Blk. 4, I. & G. N. Sur., elev. 1,175 ft. — Set 6-in. 3,525 ft.; drilling 3,960 ft.

O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I. & G. N. Sur., elev. 2,130 ft. — Shut down 2,900 ft.

WINKLER COUNTY

Amerada Petroleum Corp.'s No. 1 J. B. Walton, SW cor. NW Sec. 48, Blk. 36 — Gas sand 2,491-2,520 ft.; tested 125,750 ft. gas; reset 8-in. 2,511 ft.; shut down 2,680 ft. (corrected).

Atlantic O. P. Co.'s No. 1 Ida Hendricks, SE cor. W ½ NE Sec. 44, Blk. 36 — Rig.

Atlantic O. P. Co.'s No. 1 Grisham-Hunter, Sec. 34, Blk. B-5. Elev. 2,823 ft. — Fishing 650 ft.

Atlantic O. P. Co.'s No. 2 Grisham-Hunter — Shut down 2,522 ft.

Atlantic O. P. Co.'s No. 1 Lemar — Building rig.

G. M. Church et al's No. 1 Ida Hendrick, Sec. 29, Blk. B-5 — Rigging rotary.

Cranfill Brothers' No. 1 M. J. Basharas, ne cor. Secs. 10, 11, 32 and 33, School Blk. 77 — Rotary rig.

Cranfill & Reynolds' No. 1 Ida Hendrick, C SW NW NW Sec. 28, Blk. B-5. Elev. 2,814 ft. — Drilling 2,340 ft.

Cranfill & Reynolds' No. 2 Ida Hendricks — Top salt 1,290 ft.; top lime 2,487 ft.; drilling 2,500 ft.

Cranfill & Reynolds' No. 1 Grisham-Hunter-A — Top salt 1,271 ft.

Group 1 Humble O. & R. Co.'s No. 1 T. G. Hendricks, C SE Sec. 36, Blk. 27, elev. 2,823 ft. — Location.

Humble O. & R. Co.'s No. 1 T. G. Hendricks, NW cor. NE Sec. 42, Blk. B-5, Public School Land, elev. 2,816 ft. — Top salt 2,120 ft.; drilling 2,940 ft. in anhydrite.

Humble O. & R. Co.'s No. 2 T. G. Hendricks, SE cor. NE Sec. 34, Blk. B-5. Elev. 2,824 ft. — Pocket of gas at 2,500 ft.; blew tools out through rig; estimated 5,000,000 ft. gas; shut down 2,763 ft.; gas increased from 8,000,000 to 15,000,000 ft.

Humble O. & R. Co.'s No. 3 Hendrick, Sec. 34, Blk. B-5 — Top salt 1,340 ft.; 20,000,000 ft. gas 2,385-90 ft.; drilling 2,390 ft.

Humble O. & R. Co.'s No. 4 Hendrick, Sec. 34 — Top salt 1,362 ft.

Independent O. & G. Co.'s No. 1 J. S. Howe-D, NE cor. W ½ SE Sec. 44, Blk. 36 — Rigging up.

Independent O. & G. Co.'s No. 1 Hendricks-A, elev. 2,816 ft. — Cementing crevice 615 ft.

Independent O. & G. Co.'s No. 2 Hendricks-A, elev. 2,822 ft. — 250,000 ft. gas 2,555-75 ft.; set 8-in. 2,595 ft.; shut down 2,601 ft. (steel line measurement).

Liner Drilling Co.'s No. 1 Seth-Campbell, NE cor. Sec. 2, Blk. B-5 — Cemented 6-in. at 2,475 ft. and shut down at 2,504 ft. (steel line measurement).

Landreth Prod. Corp.'s No. 1 Grisham-Hunter, SW cor. SW NW Sec. 45, Blk. 36, School Land — Rigging up rotary.

Landreth Prod. Corp.'s No. 2 Grisham-Hunter, SE cor. W ½ NW Sec. 45, Blk. 36 — Drilling 2,615 ft.

Landreth Prod. Corp.'s No. 1 Hendricks, SE cor. SW Sec. 29, Blk. B-5 — Top salt 1,830 ft.; top lime 2,496 ft.

Mariand Oil Co.'s No. 1 Grisham-Hunter — Drilling 2,632 ft.

Mariand Oil Co.'s No. 2 Grisham-Hunter — Location.

Mariand Oil Co.'s No. 3 Grisham-Hunter — Drilling 1,100 ft., anhydrite.

Mariand Oil Co.'s No. 4 Grisham-Hunter — Drilling 1,630 ft., salt.

Mining & Engineering Co.'s No. 1 T. G. Hendricks, Sec. 10, Blk. B-13 — Location.

R. S. Matthews et al's No. 1 State, C Sec. 7, Blk. A-57, Public School Land Sur. Elev. 3,128 ft. — Material on ground.

Murchison Oil Co. and Cranfill Brothers' No. 2 Grisham-Hunter — Top salt 1,623 ft.; shut down 3,500 ft.; contract completed.

Murchison Oil Co. and Cranfill Brothers' No. 3 Grisham-Hunter — Location.

Murchison Oil Co. and Cranfill Brothers' No. 4 Grisham-Hunter — Top salt 1,260 ft.

Murchison Oil Co. and Cranfill Brothers' No. 1 Grisham-Hunter-B, Sec. 35, Blk. B-5 — Location.

Pure Oil Co.'s No. 2 Hendricks, elev. 2,827 ft. — Top lime 2,309 ft.; top salt 1,518 ft.; top lime 2,396 ft.; made 20-bbl. head at 2,635-43 ft.; 1,200 ft. oil in hole 2,657-80 ft. shut down.

Pure Oil Co.'s No. 1 Hendricks-B, NE cor. SE, Sec. 34, Blk. B-5 — Show gas 2,350-60 ft.; show oil 2,380 ft.; drilling 2,400 ft.

Pure Oil Co.'s No. 2 Hendricks-B — Top lime 2,387 ft.; cementing 8-in. 2,387 ft.

Pure Oil Co.'s No. 3 Hendricks-B — Building rig.

Pure Oil Co.'s No. 4 Hendricks-B — Location.

Republic Prod. Co.'s No. 1 Grisham-Hunter-A, NW cor. E ½ SW Sec. 45, School Block 36 — Top lime 2,125 ft.; some gas.

Republic Prod. Co.'s No. 1 Grisham-Hunter-B, SW cor. E ½ SE Sec. 41, Blk. B-5 — Top salt 1,300 ft.; drilling 1,620 ft.

Republic Prod. Co.'s No. 2 Grisham-Hunter-B — Location.

Roxana Petroleum Corp.'s No. 1 Grisham-Hunter-A, SW cor. E ½ NW Sec. 45, School Block 36 — Top lime 2,428 ft.; little gas.

Roxana Petroleum Corp.'s No. 1 Grisham-Hunter-B, SW cor. S ½ SE Sec. 39, Blk. B-5 — Cement 8-in., 2,560 ft.

Roxana Pet. Corp.'s No. 1 Grisham-Hunter-C — Rigging up rotary.

Roxana Petroleum Corp. and Llano Oil Co.'s No. 1 Scarborough, C Sec. 1, Blk. C-22, Public School Land, elev. 2,921 ft., top lime 3,132 ft. — Erroneously reported shot with 200 quarts; shot is on ground awaiting recovery of tools; total depth 3,347 ft.; plugged back from 3,447 ft.

Southern Crude Oil Pur. Co.'s No. 3 T-67 Hendricks-C, SE cor. NE Sec. 33, Blk. B-5, elev. 2,816 ft. — Top salt 1,870 ft.; little gas 2,630-40 ft.; shut down for orders 2,735 ft.; making 2,000,000 ft. gas and 1 bbl. oil; top lime 2,630 ft.

Southern Crude Pur. Co.'s No. 4 T-67 Hendricks-C. Elev. 2,810 ft. — Cemented 8-in. 2,525 ft.; small show oil and gas 2,660-65 ft.; gas increased 3,689-90 ft.; estimated 3,000,000 ft. gas 2,720 ft., 1½ bbls. oil 2,735-40 ft.; shut down.

Southern Crude Oil Pur. Co.'s No. 2 Ida Hendrick T-88-B — Rig on ground.

Southern Crude Oil Pur. Co.'s No. 1-F Hendricks, Sec. 32, Blk. B-5, NE cor. SE — Cemented 6-in. 2,529 ft.; standardized and shut down.

Southern Crude Oil Pur. Co.'s No. 1 T-89 Grisham-Hunter-A, CWL NE SW Sec. 35, Blk. B-5. Elev. 2,816 ft. — Top salt 1,219 ft.; top lime 2,298 ft.; 10,000,000 ft. gas 2,473-75 ft.; drilling 2,500 ft.

Texon O. & L. Co.'s No. 2 Grisham-Hunter-A — Running 12-in. 1,300 ft.

Texon O. & L. Co.'s No. 1 Grisham-Hunter-B, NW cor. W ½ SW Sec. 45, School Block 36 — Drilling 450 ft.

Texon O. & L. Co.'s No. 2 Grisham-Hunter-B — Rigged up and shut down.

White Eagle O. & R. Co.'s (was Gibson & Johnson's), No. 1 R. A. Lock, 1,320 ft. W of NE cor. Sec. 30, Blk. 74, NW of discovery well. elev. 2,830 ft. — Total depth 2,430 ft.; underreaming 6-in.

Southern Crude O. P. Co.'s No. 1 Ida Hendrick 3-T-67-A, C SW NW NE Sec. 4, Blk. B-12, elev. 2,784 ft. — Top lime 2,638 ft.; drilling 2,680 ft.

Southern Crude Oil Pur. Co.'s No. 2 Ida Hendrick 3-T-67-A — Shut down 1,001 ft.

Southern Crude O. P. Co.'s No. 1 T-67 Hendrick-B, NE cor. SE Sec. 44, Blk. 36 — Top salt 2,210 ft.; top lime 2,645 ft.; standardizing 2,648 ft.

Tidal Oil Co.'s (was L. D. Ladd et al's) No. 1 J. W. Amburgey, C Sec. 24, Blk. B-7, Public School Land Elev. 2,992 ft. — Top salt 1,220 ft.; drilling 4,287 ft.

Southern Crude O. P. Co.'s No. 1 Hendrick 3-T-68-A, SW cor. W ½ NW Sec. 35, Blk. B-5 — Top salt 1,365 ft.; top lime 2,308 ft.; standardizing 2,313 ft.

Southern Crude O. P. Co.'s No. 2 T-88 Hendricks-C, Sec. 28, Blk. B-5 — Spudding.

Southern Crude O. P. Co.'s No. 2 Hendrick 3-T-68-A — Drilling 450 ft.

Southern Crude O. P. Co.'s No. 1 T-88 Ida Hendricks-C, NW cor. Sec 28, Blk. B-5 — Standardizing 2,429 ft.

Turman & Maxwell's No. 1 Ida Hendrick — New location; rigging rotary.

DOMESTIC EXPORTS OF PETROLEUM AND REFINED PRODUCTS

		—Month of August—		—Eight Mos. Ended Aug.—	
		1926	1927	1926	1927
Crude petroleum	Bbls.	1,083,116	1,382,014	10,381,114	10,009,752
	$	2,267,928	2,600,317	19,168,102	16,827,288
Total refined petroleum	Bbls.	10,127,432	10,913,231	71,783,586	77,253,297
	$	45,291,492	35,413,286	334,406,286	298,155,467
Gasoline, naphtha and other light prod.	Bbls.	3,494,217	4,119,772	28,331,467	29,413,369
	$	22,188,564	17,402,822	180,905,767	150,659,762
Illuminating oils	Bbls.	2,685,465	1,669,269	14,424,070	12,393,107
	$	12,514,297	6,105,718	65,679,066	52,729,390
Gas and fuel oils	Bbls.	3,292,680	4,373,825	22,168,610	28,967,572
	$	4,282,711	4,559,377	28,786,483	34,397,804
Lubricating oils	Bbls.	640,967	739,837	6,174,253	6,374,450
	$	6,138,237	7,190,048	57,912,578	59,163,612
Other refined petroleum	Bbls.	14,103	10,628	85,186	104,799
	$	167,683	155,321	1,322,390	1,307,899
Paraffin wax	Lbs.	27,369,682	34,228,725	223,740,279	216,462,102
	$	1,496,787	1,428,787	12,441,815	10,126,697

This Bearing Will Carry Your Heaviest Drilling Loads Without Failure

American Roller Bearings are real *bearers* of *burdens.* Not just burdens —*HEAVY* burdens. No weight is too great for them to handle.

They are too good for automotive purposes. At least they are better than automotive services require. They are not made for that or any other service involving light duty.

Heavy Duty is actually their middle name.

Being made only for, and used only for, "crushing" loads,—they are a specialty in the Roller Bearing manufacturing field; a specialty far removed from ordinary, all-purpose bearings of other manufacture.

You, who read, who know oil field loads, and the character of the machinery which moves them rapidly, smoothly, with precision, without hitch or failure,—will appreciate that American Roller Bearings,—although the best,—are *not* too good for drilling work. The manufacturers, who standardize them for services where the requirements are so stiff that no other bearing will long bear the brunt of the terrifically weighty jobs, have already proved to their own satisfaction that these bearings are not beaten—nor have they an equal for oil field machinery.

We have made them for years for just such work and we make them with a wealth of oil field service experience that sets the standards for their production.

AMERICAN HEAVY DUTY TYPE "C" ROLLER BEARINGS

are without a worthy rival for:

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The troubles all too familiar to users of clutches are being eliminated entirely by leading clutch manufacturers who have standardized on American Roller Bearings.

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The newest and most modern type drilling machine is depending upon American Roller Bearings at the most important places in its construction.

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Half a dozen of the most popular blocks (practically all of most modern designs) get rid of bearing grief to everybody's satisfaction by depending upon American Roller Bearings.

Crown Block Service

American Roller Bearings are the reliance for this service also in the type of block which is best suited to deep drilling and heavy casing burdens.

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Get them in the first place;
Use them to replace plain bearings

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PITTSBURGH, PENNA.

The Holmes-Manley *Cracking* Process

Flexibility of Operation.

High Yield of Quality Gasoline direct from the Unit.

Fractionation and Condensation under Full Operating Pressure.

High Yield of Liquid Products with a minimum yield of fixed gas and carbon.

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W. S. S. RODGERS

17 Battery Place, New York, N. Y.

Branch Office

816 Palace Building, Tulsa, Okla.

CENTRAL WEST FIELDS

(Continued from Page 63)

with No. 1 on the George Hartman farm, Section 28.

In Mercer County, Center Township, Mack P. Colt and others abandoned No. 1 George W. Bogart, No. 1 A. B. Hanline, No. 1 Henry Wuester and No. 1 Julia A. McKernan farm, all in Section 9. In Hopewell Township, T. G. Ayres pulled No. 2 S. and J. Heine farm, Section 2.

In Lucas County, Oregon Township, the Ohio Oil Co. abandoned Nos. 12 and 24 Gertrude J. Niles farm, Section 20, and No. 3 on the J. H. Heckman farm, Section 12. William W. Farnsworth pulled Nos. 3 and 4 W. Holley, Section 25, and No. 1 on the Tim Leroux farm, Section 30.

In Darke County, Mississinewa Township, the Illindo Oil Co. pulled out and abandoned Nos. 2 and 3 on the Frank Siefring farm, Section 2.

Indiana

Only two completions were reported from the Indiana Field during the past few days and they are in the old Trenton Rock producing area in the eastern portion of the State. In Bear Creek Township, Jay County, the Waterloo Oil & Gas Co.'s No. 5 on the Clarence Brinkerhoff farm, Section 21, is said to show 10 bbls., with No. 6, same farm, drilling. B. Stickler is drilling a test on the A. Downing farm, Section 18, same township. In Penn Township, same county, the Amber Oil & Producing Co.'s No. 11 on the J. M. Sutton farm, Section 21, is reported a dry hole. In Pike Township, same county, and a mile or so east of the old Hotmire Pool, Nick Masters is making an attempt to extend the once rich pool by drilling a test on the Christ and William Kent farm.

In Blue Creek Township, Adams County, the Paul Schulte Oil & Gas Co. is drilling No. 4 on the Ed Lugabill farm, Section 20. In Hartford Township, the Maybier Oil Co. is drilling a second test on the W. Egley farm, Section 13. In Wabash Township, W. E. and C. H. McKelvey are drilling a test on the John Brown farm, Section 21.

Illinois

The best of the late completions in the Illinois Field was the Ohio Oil Co. and the Associated Producers Co.'s No. 38, in the southwest corner of the Smith-Neely Oil Co. farm, in the southwest quarter of Section 2, Dennison Township, Lawrence County, with an initial production of 30 bbls. from the shallow Bridgeport sand, which was found from 953 to 994 feet, and given a 100-quart shot. Phipps, Blosser and others' second test in the southeast corner of the Wesley Clark farm, in the southwest quarter of Section 2, pumped an initial of 25 bbls. from the shallow sand from 946 to 985 feet and shot with 70 quarts. The Ohio Oil Co. abandoned No. 1 on the Charles Gillespie farm, Section 1, same township.

In Casey Township, Clark County, W. C. McBride, Inc., drilled a dry hole 1,000 feet from the south line and 600 feet from the east line of the James Rush farm, Section 26, being well No. 28 on this farm. In Johnson Township, same county, Tom Stewart and others' No. 6 well, 600 feet from the north line and 200 feet from the west line of the Bert Bailey, trustee, farm, in the southwest quarter of Section 13, was drilled to a depth of 560 feet and dry.

In Wabash Township, Wabash County, J. S. Young, Jr., and others' second test, 200 feet from the south line and 1,000 feet from the west line of the Winnie Sparks farm, Section 36, was a duster at 1,550 feet. Adams Corner Oil Co. is drilling No. 11 M. Madden farm, Section 6. Breen Oil Co. is working at No. 7 Breen farm, Section 2. Miller & Karns are putting down No. 2 on the W. M. Price, Section 14, and the Wabash Oil Co. is drilling No. 7 S. J. Stillwell, Section 1. In Friendsville Township, same county, Miller & Lengelsen's test on the W. M. Lentz farm, Section 19, is a dry hole.

In Kansas Township, Edgar County, Henderson Brothers' test on the C. Pinnell farm, in the southeast quarter of Section 7, failed to find any oil in the Westfield lime at from 449 to 467 feet, and drilled to 750 feet and dry.

Central Ohio

Nineteen completions are reported from the Central Ohio Field since the last review. Very few new locations have been staked out, although there are plenty of places yet to drill within defined areas as well as in advance of production. Just at present much attention is attracted toward the Cleveland Field, in Cuyahoga County, where very good results are being obtained in the way of natural gas. Some few years ago there was an active drilling boom close up to the city and in fact along the lake front in the fine residence section and many a well was drilled on town lots. The present drilling wells are on acreage property to a large extent and will maintain their production much longer than on the city lots where wells are drilled too close together, as was the case in the older development.

In Dover Township, Cuyahoga County, Groff Brothers brought in a nice gas well in the northeast corner of the Scharf 1-acre lot, also a good gas well at No. 1 on the Dicker 3 acres, in Lot 6, the Scharf well being in Lot 7. In Strongville Township, the East Ohio Gas Co. got an unusually good gasser at a test near the northwest corner of the O. Mandelkow 16 acres, Lot 32, and the Empire Gas & Fuel Co. a good gas well at a test in the southwest corner of the H. M. and M. O. Whitney 65 acres, Lot 32. Dillon & McFrederick are drilling No. 1 G. Beriswell 99 acres, Lot 49, and No. 2 on the J. A. and J. G. Pack 75 acres, Lot 31. John Arthur is drilling No. 1 on the B. B. Heazlitt 87 acres, Lot 28. In Olmstead Township, Hulse & Kundtz have a nice gas well in the northwest corner of the A. Skoba 10 acres, Lot 31, getting the gas in the Newburg sand. This firm is drilling No. 1 in the southeast corner of the O. J. Paddock 60 acres, Lot 30, and struck a good gas well at a test in the northeast corner of the J. Barrow 21 acres, Lot 32. Daugherty & Dempsey made the best gas strike of the Cleveland Field for a long time when they brought in their No. 2 in the southeast corner of the B. C. Austin 21 acres, Lot 32, being estimated close around 4,500,000 feet from the Newburg sand. Arthur & Simpson are drilling No. 1 in the northeast corner of the A. R. Kirk 30 acres, Lot 32, as well as five others in the county.

In Franklin Township, Summit County, the East Ohio Gas Co. is drilling tests on the Robert Miller 162-acre farm, in Section 28, and on the L. Wolf farm, same section.

Coshocton County

In Coshocton County, Monroe Township, the East Ohio Gas Co. brought in a well far above the average gasser in No. 3 which is 675 feet from the north line and the same distance from the east line of the M. J. Nyhart 122-acre farm, Section 1. Same company started drilling a test in the northwest corner of the David Mohler 75 acres, Section 9. In Newcastle Township, Bell Brothers have an average gas well in No. 18 on the J. W. Cassingham farm, Lot 18, and the Logan Gas Co. made a location for a test in the northwest corner of the same township, 200 feet from the south line and 1,000 feet from the east line of the Edwin O. Rodeheaven 300 acres.

In Holmes County, Kilbuck Township, the East Ohio Gas Co. is drilling a test on the D. N. Snow 40 acres, Lot 18, and made a location for a test 660 feet from the south and west lines of the J. W. Moore 40 acres, Lot 13. I. E. O'Hail is drilling a test on the W. W. Scott 59 acres, Lot 16, Knox Township. Empire Gas & Fuel Co. made a location for a test near the southwest corner of the M. G. Bird 100 acres, Lot 10, Monroe Township, same county.

In Wayne County, Chester Township, Harmon & George struck a nice gas producer in a second test in the northeast corner of the E. M. Myers 81 acres, Section 8. In the same section, the Ohio Fuel Gas Co. has an average gas well at a test in the northwest corner of the J. and F. Tyson farm. Harmon and George are drilling No. 1 on the H. P. Gable 6 acres, Section 8. In Congress Township,

Col-Tex Refining Co., Colorado, Texas

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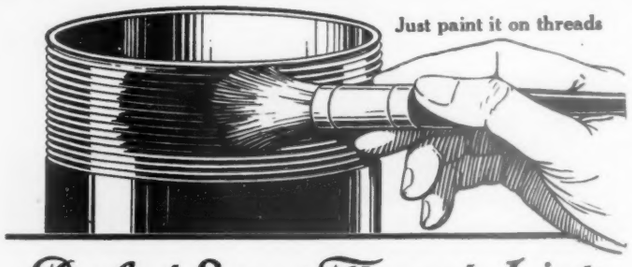

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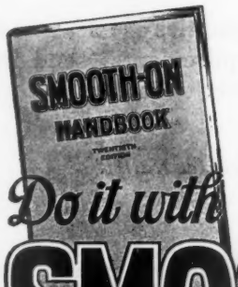

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the Logan Gas Co. is drilling No. 1 on the J. C. Cline farm, Section 20.

In Lorain County, Grafton Township, the Ohio Fuel Gas Co. has a good gas well, 700 feet from the north line and 800 feet from the west line of the J. Grabenstetter 102 acres, Lot 51. In Columbia Township, the same company is drilling a test near the northeast corner of the John H. Bartter 27 acres, Lot 27, and the Empire Gas & Fuel Co. made a location for a test in the southwest corner of the G. and M. Brooks 60 acres, Lot 15.

Medina County

In Medina County, Chatham Township, the E. R. Edson & Son Co.'s Nos. 29 and 30 on the W. P. Wertz farm, Lot 5, Section 14, are good for 1 bbl. each at depths of 378 and 380 feet. In Liverpool Township, the Logan Gas Co. has a light gas well at a test 1,000 feet from the north line and 700 feet from the west line of the T. G. Reusch 86 acres, Lot 7. In Lafayette Township, M. C. and G. K. Rogers' test, 850 feet from the north line and 725 feet from the west line of the S. R. Poots 107 acres, is a commercial gas producer. This firm is drilling No. 1 on the Paul Rerto 50 acres, Lot 36. The Logan Gas Co. is drilling No. 1 on the John Lutsch 13 acres, Lot 8.

In Ashland County, Green Township, the Logan Gas Co. has an average gas well at a test in the northeast corner of the Joseph R. Craig 90 acres, Lot 26. In Clear Creek Township, same company has a dry hole 565 feet from the south line and 875 feet from the east line of the John Shaw 420 acres, Section 12. The Kemrow Co. also hit a duster at a test near the southwest corner of the A. G. Meiser 65 acres, Section 15, while Ringler and others found a nice gas producer at a test in the northeast corner of the Sprott 2 acres, Section 3. In Troy Township, Arnold, Buffenmyer & Devoe are starting a test on the Ray Arnold farm, Section 2. The Logan Gas Co. is drilling a test on the David F. Hay farm, Section 19, Hanover Township.

In Jefferson Township, Knox County, the Upham Gas Co. is drilling a test on the M. H. Adrain 160 acres, Section 19, and the East Ohio Gas Co. is drilling a test on the Michael Strang farm, Section 20.

Michigan

Only a few completions are reported for Michigan since the last review. A number of wells are drilling near the Berea sand, while others are going down to test out either the Saginaw or Dundee sands, but the chances do not at this time look favorable for the lower formations, as the Berea is furnishing almost the entire production of crude in Michigan.

In the Saginaw Field proper, the Sun Oil Co.'s No. 7 on the John Stelzreide farm, Section 11, Saginaw Township, right in the heart of the early development of the pool, struck the top of the Berea sand at 1,831 feet, and when the sand was penetrated 16 feet the well was given a shot, and is estimated at 15 bbls. This company's No. 8 on the Shoenteit farm, in the same section, proved dry in the Berea sand and drilled on down to the Saginaw sand, which was topped at 2,325 feet and then sent through that formation to a total depth of 2,355 feet, with no showing worth while, and goes as a dry hole.

The Fordney Petroleum Co. went through both the Berea and Saginaw sands at a test in the Owosso Field of Shiawassee County, both sands being dry. Berea was found at 1,908 feet and the Saginaw sand at 2,380 feet.

The test of Ellis and others on the Edward Kobs farm, in Birch Run Township, Saginaw County, and 1½ miles south of the town of Frankenmuth, does not show much encouragement, outside of a small volume of gas. In this test the top of the Berea was found at 1,672 feet and there were 25 feet of sand, and at 1,701 feet water was encountered, but drilling continued and found the top of the Saginaw sand at 2,125 feet and went only 14 feet deeper. In Swan Creek Township, same county, E. W. Miller struck a flow of water at a test on the O. K. Bailey farm, in Section 13, and about 2 miles north of the town of St. Charles. The water was found at approximately 385 feet.

Reports from Alcona County are that the well drilled in Haynes Township was probably a failure so far as either oil or gas is concerned.

Field Notes

While drilling a test hole in the western area of Midland County, on the John Rayner farm, Section 18, Greendale Township, the Pure Oil Co. got a showing in what is thought to be the Marshall sand formation at a depth of 1,132 feet, and filled up about 500 feet with fluid. This oil is black and a low grade, testing 26.2 gravity. It is announced that the well will be tubed and given a few days' pumping to show its value. Big salt water pools are usually found in the Marshall sand and have proved a hard proposition to drill through in most parts of the State. Oil showings have been found before in the same formation in Midland County, as some of the salt wells of the Dow Chemical Co. have shown oil.

A rig was put up some time ago on the Allen property at Baum and Johnson Streets in Saginaw by W. M. Bradley & Son, but it has been dismantled and moved to the vicinity of Mount Morris, in Gratiot County, between Saginaw and Flint. Neighbors near the location of the rig when on the Allen property objected to the drilling of the hole there, which was the reason for the tearing down of it.

The Sun Oil Co. is starting its No. 4 on the Pere Marquette right of way south of the No. 1 well on the same property and between Genesee Avenue and Davenport Streets.

EASTERN FIELDS

(Continued from Page 60)

F. E. Baughman farm. It is a 5-bbl. pumper.

The Atha Oil Co.'s test on the J. H. Denny farm, in the northwest quarter of Section 6, Madison Township, Perry County, is showing a little oil and gas in the Clinton sand. In the southeast quarter of Section 3, Rush Creek Township, Fairfield County, R. P. Hass and others have completed a test on the James A. and J. E. King farm. It is not good for more than 5 bbls. a day in the Clinton sand.

Medina County

In Lot 5, Chatham Township, Medina County, E. R. Edson, Son & Co. have completed Nos. 29 and 30 on the William P. Wertz farm. Both are very light pumpers at a total depth of 378 and 380 feet respectively. In Section 32, Knox Township, Columbiana County, George Kiel has a light pumper in the Berea grit at No. 8 on the D. W. Thomas heirs' farm.

On Spruce Creek, Union district, Ritchie County, the Pittsburgh & West Virginia Gas Co. has completed the rig for a test on the C. M. Smith farm. In Booth Creek district, Taylor County, the Hope Natural Gas Co. is rigging up on the B. S. Payne farm.

In Lee district, Calhoun County, C. B. Lewis and others have the rig completed for a test on the James Wilson farm. The Calhoun Oil & Gas Co. has started to drill on the D. J. Brannon farm. In Sherman district, F. F. McIntosh has the rig completed on the S. B. Minney farm. In Center district, Gilmer County, the Chartiers Oil Co. has the rig completed for a second test on the G. D. Stump farm.

In Geary district, Roane County, Douglas Brothers have a rig up on the R. F. Sergent farm. The Producers Oil Co. has tools at a location on the David I. Horner farm. In Smithfield and Spencer districts, Godfrey L. Cabot has rigs up on the E. P. Harless and Nellie B. Starr farms. In Reedy district, the Heck Oil Co. is drilling at 900 feet on the F. D. Vandale farm.

Braxton County

In Birch district, Braxton County, the Philadelphia Gas Co. has started to drill on the Charles H. Bourne farm. The same company is rigging up on the Bennett Oil & Gas Co.'s lease. The same com-

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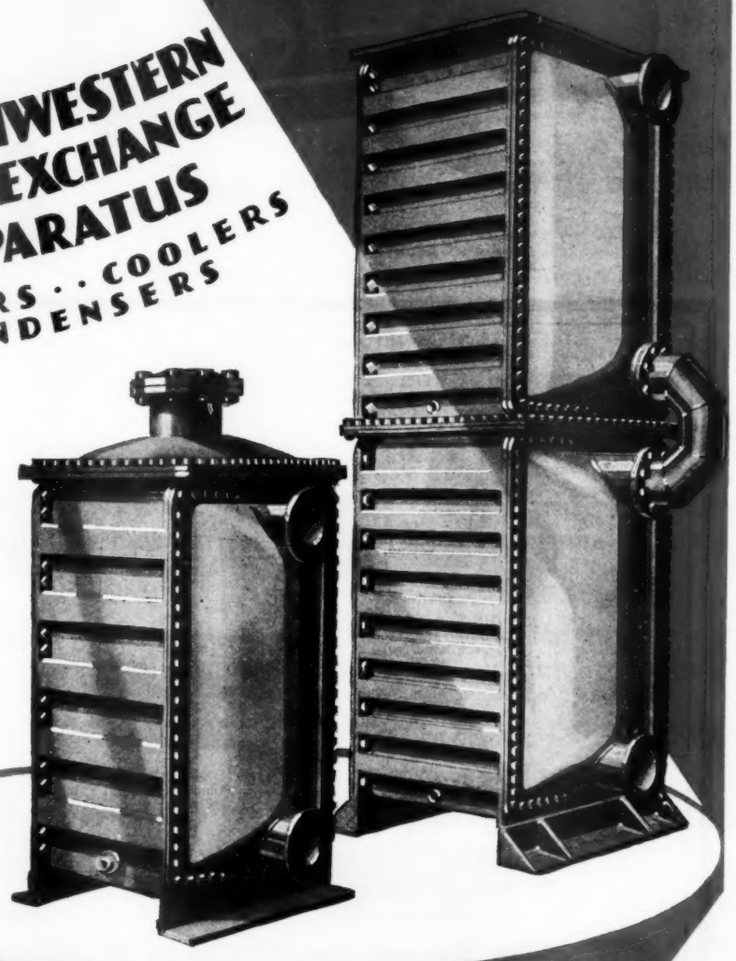

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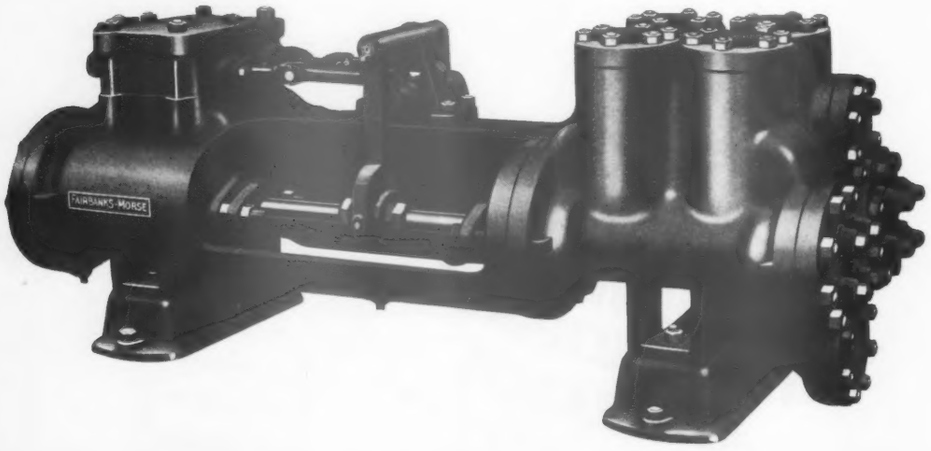

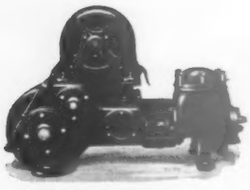

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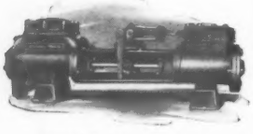
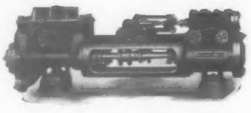


"Mid-Continent" Duplex Piston Steam Pump for pressures up to 800 pounds.



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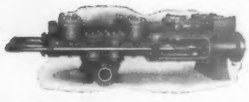
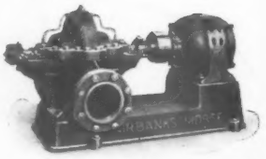


"Coalinga" Duplex Plunger Steam Pump for field service—outside and packed for pressures up to 750 pounds.



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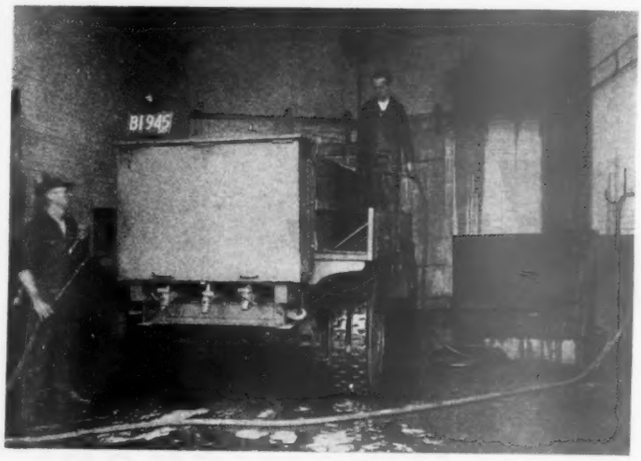

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pany is building a rig on the S. B. Cork farm.

In Clark district, Harrison County, the Clarksburg Light & Heat Co. has rig materia lat a location on the C. S. Stout farm. In Hackers Creek district, Lewis County, Edward McCall is due in the Gordon sand on the L. G. Thompson farm. In McElroy district, Tyler County, the Hope Construction & Refining Co. is rigging up on the Hannah Merritt farm. In the same district, Sutton Brothers have a rig up on the J. V. Blair farm. On Luther Run, Murphy district, Ritchie County, the Hope Construction & Refining Co. has the rig completed for a second test on the J. L. Hill farm. In Lee district, Calhoun County, M. F. Crowley has the rig completed for a second test on the William Sturms farm.

In Geary district, Roane County, the United Fuel Gas Co. has made locations on the H. D. Sergent, G. A. Wright and J. S. Allen farms. In the same district, the Morley Oil & Gas Co. is drilling at 1,915 feet on the Sergent School Lot. In Mannington district, Marion County, the Buffalo Oil Co. is drilling on the H. C. Grim farm. In the same district, the Maxon Oil Co. is drilling on the H. A. Fetty farm. The rig for Monroe & Laughlins' test on the J. M. Tennant farm is building.

Southwest Pennsylvania

The Carnegie Natural Gas Co.'s test on the Ella Sowers farm, in Richhill Township, Greene County, is dry in the Gordon sand. In the same township, Guy Patterson has drilled to the lower sands his No. 1 on the John Weaver farm. It is also a duster.

Three-quarters of a mile northwest of the Natural Gas Co. of West Virginia's test on the S. A. Dauge farm, in East Finley Township, Washington County, the New Oil & Gas Co.'s test on the John Lough farm is a gasser.

In Perry Township, Greene County, the Carnegie Natural Gas Co.'s test on the M. L. Jones farm is a gasser good for 1,000,000 feet in the Gordon sand. In Greene Township, the Peoples Natural Gas Co. has completed No. 3 on the Ross Husk farm. It is a fair gasser at a depth of 3,320 feet. In Whitely Township, Sterling & Van Voorhis have completed a test on the Baker Bare farm and had the same luck. Drilling was suspended at a total depth of 3,200 feet.

KENTUCKY-TENNESSEE

(Continued from Page 63)

better, they will know where to increase their production.

In District 18 of Lee County, Miller & Cole's No. 4 on the Robert Day farm, is a 5-bbl pumper.

In Shallow Territory

Drilling in the shallow territory in hopes of getting wells good for a barrel or so, is now the slogan. In District 8 of this county the Superior Oil Corp. drilled in two dry holes in Nos. 18 and 19 on the J. D. Alexander farm; and a 1-bbl. pumper in No. 16 Green Campbell farm, and one of the same size in No. 13 on the A. F. West and others' farm. In the same district, Brenner & Adams drilled in two wells good for 3 bbls. each, in Nos. 6 and 7 on the John Spark farm.

In District 6, Morgan County, the Lewis Oil Corp.'s No. 3, on the Kentucky Cannel Coal Co.'s land, is a 2-bbl. pumper.

In District 27 of Johnson-Magoffin Counties, the Model Oil Co.'s No. 3 Frank Prater farm, is a 5-bbl. pumper.

In District 21, of Floyd-Knott Counties the Ivyton Oil & Gas Co. struck a nice gas well in No. 1 on the F. F. Martin farm, and is now drilling five more wells in the same field. The Distill-Martin Oil & Gas Co. is drilling No. 1 Sadie Allen farm and No. 2 on the Oak Osborn farm, same area, and the New Domain Oil & Gas Co. is drilling No. 3 on the Esther Horton farm.

For the first time in months the old Wayne County Field failed to report one completion, although half a dozen wells are under way and nearing the depth to find the producing sands.

Western Division

The Western Division is the most active portion of Kentucky at this time. More leasing has been done in Ohio, Daviess, McLean and Butler Counties than at any time since Warren, Allen and Barren County fields were in their infancy.

There has been a little rush to Butler County to the southeast of Ohio County and between there and the Warren County producing area, owing to the finding of oil on the T. C. Barton farm, about 1½ miles east of the town of Rochester, which is reported to be pumping 10 bbls. The claim is that the well was damaged by shooting it. R. E. Lingenfeller, of Lawrenceville, Ill., is starting another well on the J. F. Hays farm, near Rochester and about one-half mile east of the Barton well. Several other wells are planned for the near future. O. J. McQuiggan, Robinson, Ill., and Fred C. Bell Pittsburgh connected with the Laughtner interests of Pittsburgh and St. Petersburg, Fla., have taken a block of leases on about 3,000 acres near Morgantown, the county seat of Butler County, and expect to begin drilling within a short time.

McLean County

The most significant incident in oil circles was the showing of oil in the wildcat well being drilled by Dimmick Brothers, on the John Ratliff farm, close to Livia, McLean County, west of the rich Ambrose Pool, of Ohio County. The showing was found in a stray formation at a depth of around 640 feet. This encourages the owners as well as contractors to drill deeper in the hope of striking a better sand. Some geologists have contended that this location was in the Rough River Fault, and that no oil would be found there. Others have held to the contrary. The finding of sand is an encouraging feature, and while the showing does not necessarily mean a producing well, the outlook is encouraging. Upon the strength of the showing found many leases have been taken up and other tests will be made and the present drilling well will test out lower formation if any exists.

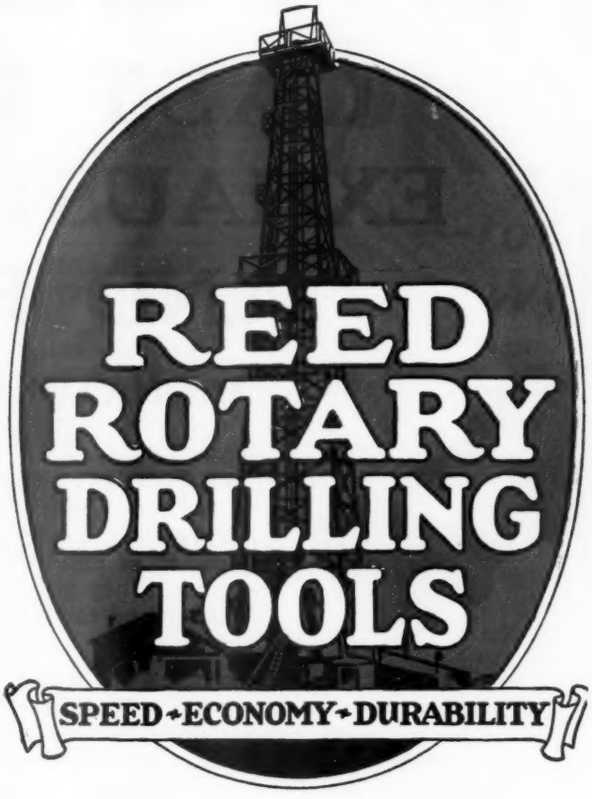
Edmonson County

Advice from Bowling Green, Ky., is that a second test is being drilled on the John Poteet farm, north of Green River and north of Mammoth Cave in Edmonson County. This well is only about two locations from the No. 1 Poteet that was finished last February and is 7 miles east of Kyrock and went to a total depth of 1,142 feet and shot with 40 quarts was estimated at that time at 10 bbls. This development is in the asphalt country, where tons are mined daily, and between the Barren County Field to the east and Ohio and Butler Counties to the west. Although No. 1 Poteet was not a large producer it proves that this structure will produce 44 gravity oil with 20 feet of sand, and No. 2 now drilling will be watched with interest and may mean the opening of an entirely new field.

There are two structures in this section that are very pronounced and which were formally worked out by a State report now in process of publication. The Big Hollow structure where the first wells are being drilled has been checked in detail recently with plane table by several leading geologists. There are 12,000 acres covering these two structures and the adjacent territory which was leased by Miss Margaret Hobson of Bowling Green, and is now owned by Miss Hobson and the Green River Oil Co.

Ohio County

Ohio County still maintains its great activity and new work is spreading over most parts of the county, in hopes of finding wells similar to those in the Ambrose Pool. Since the previous report from the field, not so many big producers have been reported as but two are in the large producing class at an estimated production of 250 bbls. each. They are the Creek Drilling Co.'s No. 9 on the Fannie Lake 100 acres, and Daugherty and others' No. 4 on the Cora Wells 130 acres. The Wells leases is quite a distance west of the Lake farm and both leases are among the best in the Ambrose Pool. Other completions in advance of the pool are small in comparison with those in defined limits. There are several wells in the richest portion of the pool that are ready for completion and the next



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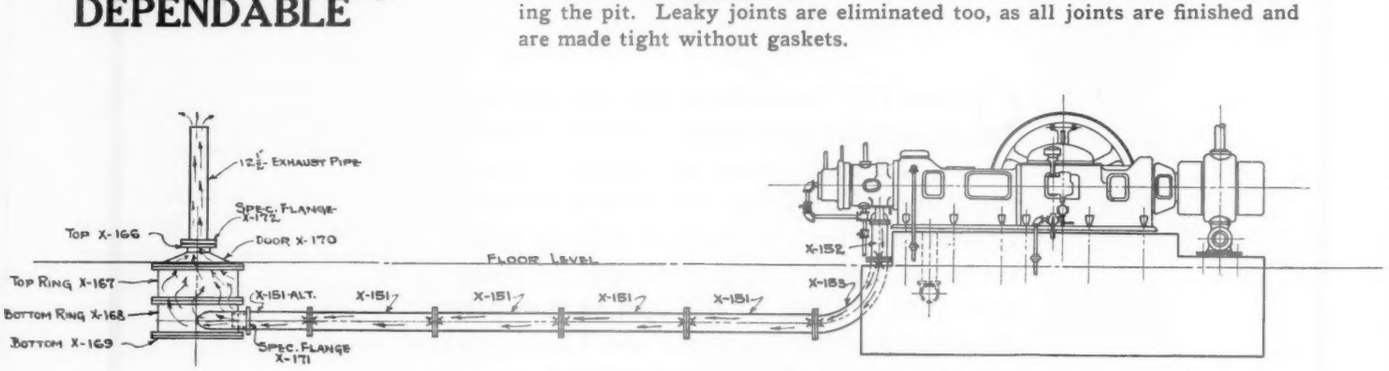

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few days should show a heavy production increase in the county.

Southeast a few miles from the Ambrose Pool, Daily & Loman's test adds quite a strip in that direction although only a 10-bbl. producer. A string of 521 feet of casing was set in this hole which is on the Bob Hamilton farm, the sand being found from 521 to 531 feet and shot with 80 quarts.

A mile or south of the Ambrose Pool, James C. Ellis drilled a test 1,200 feet from the south line and 200 from the west line of the M. S. Bartlett farm, near Clear Run, setting a string of 585 feet of casing, with sand from 594 to 652 feet and shooting with 80 quarts, and estimated at 15 bbls. initial. His No. 1 test in the northwest corner of the Ada Keith farm, southeast of the Ambrose Pool, cased at 684 feet, got sand from as far down as 698½ feet and was shot with 60 quarts, getting a reported 10-bbl. initial well. His No. 1 in the northwest corner of the Mt. Moriah Church property, also southeast of the big pool and near the Keith, set casing at the usual depth and secured what is reported as a 15-bbl. producer.

The Ohio Oil Co.'s No. 1, on the Frank McKinley farm, is reported at 5 bbls., while No. 1 on the Ira Lloyd farm, is a gas well. Same company's No. 1 on the Will Lake farm, is reported making a good showing.

In the Midkiff Pool to the northeast of the Ambrose Pool, the White Plains Oil & Gas Co.'s No. 3 on the Ivo Howard 214 acres, is reported a dry hole.

Activities at this time are being directed to the Bell's Run area to the northwest of the Ambrose Pool about 3 or 4 mils and near the Daviess County line. Activity was started toward this section when Daily and Loman brought in their good well on the Ollie Ezell farm. Since then several wells have been started in that vicinity. No. 2 on the Ezell farm is drilling.

Daviess County

The wildcat well drilled by the Rowe Oil Co., on the Poor Farm, several miles from Owensboro, in Daviess County, failed to make a showing around a depth of 900 feet and will be given up as a failure. The drilling contract work was done by the Leeper Oil Co.

Several new wells are starting up in the Roby Pool and the outlying district, southwest of Pellville, in this county.

Warren County

Only one new completion is reported from the Bowling Green Field in Warren County, which is O. J. McGregen and others' No. 1 on the L. H. Hunt farm, which is a 4-bbl. pumper at a depth of 495 feet.

A few completions from the Glasgow Field of Barren County, shows small producers and some dry holes. In the Bechton-Stoney Ridge regions, the Samson Oil Co. got a duster at a test on the Furlong farm, when salt water was found at 542 feet. Ziegler and others' No. 2, on an unknown lease, was dry at 522 feet and No. 3 same lease was also dry at 529 feet, salt water being found in both holes.

In the Lecta Pool and outer edges, White & Stombo got a dry hole at a test on the J. W. Gooden farm, at 504 feet. Ziegler and others' No. 1 Jim Brey farm, showed an initial production of 6 bbls. at 512 feet. Hunt, Leach and others' No. 1 Nichols farm, produced but 1 bbl. at 450 feet. Sampso Oil Co.'s No. 9 Walter Browning farm, pumped 10 bbls. at 410 feet, and No. 10 pumped 20 bbls. at 405 feet. R. B. Tylers' Nos. 2 and 3 Peden farm were dry holes at depths of 445 and 446 feet.

PLANS COMPLETED FOR GAS CONVENTION

(Continued from Page 66)

"Coking and Swelling Constituents of Coal," by Prof. R. T. Haslam, Massachusetts Institute of Technology, Cambridge, Mass.

"Relation of Fusibility of Coal Ash to Clinker Formation," Bureau of Mines.

Thursday afternoon's program follows: "Effect of Method of Carbonization of Coal Tars," by S. R. Church, Consulting Engineer, New York, N. Y.

Symposium on Naphthalene Determination, by members of U. G. I. Staff, Philadelphia, Pa.; Consolidated Gas, Electric Light & Power Co. of Baltimore, Md.; United States Bureau of Mines, and others.

Symposium on Organic Sulphur Compounds in Gas, by W. J. Huff, Johns Hopkins University; N. F. Prince, Rochester Gas & Electric Corp.; Koppers Company Laboratory, and others.

The home service committee on Wednesday afternoon will hear school talks:

"The Particular Problems of Natural Gas," by Mrs. Flora B. Frey, East Ohio Gas Co., Cleveland, Ohio, and "Growing Up With the Gas Idea," by Miss May A. Bennett, East Ohio Gas Co., Cleveland, Ohio.

CALIFORNIA RECEIPTS AND PETROLEUM IMPORTS

Imports of crude and refined oils at the principal United States ports for the week ended September 24 totaled 1,547,000 bbls., a daily average of 221,000 bbls., compared with 1,567,000 bbls., a daily average of 223,857 bbls., for the week ended September 17 and a daily average of 205,786 bbls. for the four weeks ended September 24.

At Atlantic Coast Ports—	
Baltimore	279,000
Boston	51,000
New York	751,000
Philadelphia	.....
Others	356,000
Total	1,437,000
Daily average	205,286
At Gulf Coast Ports—	
Galveston district	40,000
New Orleans and Baton Rouge	50,000
Port Arthur and Sabine district	.....
Tampa	20,000
Total	110,000
Daily average	15,714
At All United States Ports—	
Total	1,547,000
Daily average	221,000
Daily average four weeks ended	205,786

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended September 24 totaled 588,000 bbls., a daily average of 84,000 bbls., against 895,000 bbls., a daily average 127,857 bbls., for the week ended September 17 and a daily average of 113,929 bbls. for the four weeks ended September 24.

At Atlantic Coast Ports—	
Baltimore	.....
Boston	117,000
New York	275,000
Philadelphia	196,000
Others	.....
Total	588,000
Daily average	84,000
At Gulf Coast Ports—	
Daily average	.....
Total Atlantic and Gulf Coast ports	588,000
Daily average	84,000
Daily average four weeks ended	113,929
Distribution of total California receipts is as follows:	
Crude	78,000
Gasoline	250,000
Gas oils	79,000
Fuel oils	181,000
Total	588,000

INSTALLING GAS LIFT IN PINE ISLAND FIELD

(Continued from Page 74)

ment in the field. The lifts will be operated on gas formerly allowed to blow in the air and by the recycling principle, the gasoline content also will be conserved.

Gas produced in the field is extremely rich in gasoline content, making the operation of gasoline plants and lifts jointly a logical step in the conservation of the field's resources.

DEATH OF MRS. A. W. M'COY

DENVER, Colo., Sept. 27.—Mrs. Helen Aylesbury McCoy, wife of Alex W. McCoy, vice president of the Marland Oil Co. of Colorado, and past president of the American Association of Petroleum Geologists, died in this city last week following an illness of five months. Mrs. McCoy was a graduate of the University of Missouri. She was a member of the Denver chapter of the Daughters of the American Revolution.

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2½	10	15
3	10	15
4	10	20
4½	10	20
4¾	10	20
4⅞	10	20
5⅛	10	20
6	11	30
6¼	11	30
6⅝	11	30
8¼	12	40
10	12	60
12½	14	105
14	15	115
15½	15	150
16	15	150
18	16	170
20	16	195

Intermediate sizes, also sizes larger or smaller than listed can be furnished.

Note:—Smallest inside measurement is the same as inside diameter of pipe or casing on which nipples are to be used. In ordering, give size, weight, pitch of thread and make of casing on which nipple is to be used and also size and weight of casing through which nipple is to pass.

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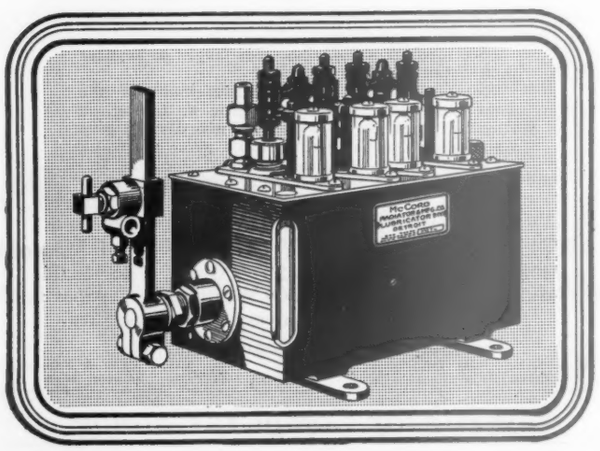

PROPOSED PIPE LINE FROM LA BARGE; MIDWEST BUYS CALIFORNIA'S OUTPUT

By Tolbert R. Ingram

DENVER, Colo., Oct. 1.—A pipe line from the La Barge district in southwestern Wyoming to the Union Pacific Railroad is practically assured as a result of the signing of an agreement between the California Petroleum Corp. and the Midwest Refining Co., whereby the Midwest contracts for the purchase of the other company's production and in return agrees to construct the line to transport it to a railhead. The projected line has been discussed for a long time and the California company had had surveys made and had obtained a certificate of convenience and necessity for the construction of the line from the State of Wyoming. This franchise will be turned to the Midwest as a result of the deal.

Some of the details of the project remain to be worked out by the engineering department. These include the size of the pipe, which probably will be either 6-inch or 4-inch, and some of the mechanical features. The destination will be Opal, on the Union Pacific Railroad just to the east of Kemmerer, a coal mining town of about 1,500 population. The oil will go to the Utah Oil Refining Co. for its plant at Salt Lake City. Whether the line will be owned by the Midwest Refining Co. or the Utah Oil Refining Co. is another detail not yet definitely determined. Actual construction probably will not start until spring and is contingent on a guarantee of a minimum daily average of crude to run, said to be 2,000 bbls. The developed production of the field is not quite up to that quantity at present, but the California company is to continue drilling operations and is expected to have the required quantity by the time the line is ready to receive it. The length of the line will be approximately 40 miles.

To Encourage Drilling

The construction of the pipe line is expected to give a considerable impetus to drilling operations in that territory which have been carried on spasmodically for many years, and upon a somewhat larger and more systematic scale during the past year or two following the entrance of the California Petroleum, Utah Oil Refining, Texas Production and other companies into the district. The La Barge operation lies principally in Township 27, Range 113w, in Sublet County, 40 miles north and east of Kemmerer, and approximately the same distance east of the Utah boundary. Twelve to 15 miles to the north of La Barge is the Dry Piney district. Prospecting has been in progress at intervals not only on the La Barge and Dry Piney anticlines, but on anticlinal folds extending on down into Uinta County in the southwestern corner of the state where some small wells were drilled as far back as in 1900. The La Barge district is for the most part blanketed by Tertiary Wasatch, a condition which appears to have rendered impossible for a long time a precise interpretation of the folding in the partly masked Cretaceous rocks. Most of the prospecting up to early in 1926 had been done by local companies. This had resulted in the bringing in of several small producers at shallow depths. Early in 1926, the California Petroleum Corp. began to buy into the field. Previous to that time some core drilling with diamond drills had been done to work out the structure which showed that the fold passes northward through the middle of Sections 27 and 34-27-113. While the Frontier formation, which correlates to a certain extent with the same formation in the central part of the state (including Salt Creek, in which are the Wall Creek sands) was found at a little below 400 feet at La Barge, the underlying sections have little in common with those to the east and northeast.

Present Production

Up to this time 25 producing wells have been completed in the district. These wells have a capacity of about 1,800 bbls. a day, of which about 1,200 bbls. is owned by the California Petroleum Corp. The average for all the wells is about 72 bbls. a day. All the wells are not being produced at capacity. Most of the oil is going into storage, the California company having a 55,000-bbl. tank in the field which is almost full, and is preparing to erect an 80,000-bbl. tank. Some of the production is used in drilling and small shipments are made by truck to Susie, on the Oregon Short Line, where it is shipped in tank cars to the Utah Oil Refining Co. at Salt Lake City. The depth to the producing horizon is around 1,200 feet, some smaller production being found at around 400 feet. The California Petroleum Corp. is drilling a deep test in its No. 2, NW cor. SE Section 34-27-113, which at a depth of 4,670 feet is changing over from cable to rotary tools. This well is being produced from the 860-foot level where it had an initial production of 200 bbls. It also had about 600 feet of oil and considerable gas at 2,900 feet.

The oil is of a fair grade, testing 29.5 gravity and is a good fresh still charging stock. It has a paraffin base and a gasoline content of about 15 per cent. Late scout reports show 22 wells drilling and 2 rigs up in Sublet County, and 2 wells drilling in Uinta County.

AUSTRIAN REFINERY CLOSED

There are three refineries in Austria equipped to handle crude petroleum. One of these has now ceased operations altogether, while the other two are operating at less than 50 per cent of their capacity. The refineries are owned by oil companies with interests in near-by oil-producing countries, and for the most part they find it cheaper to refine their oil in the country of its origin and to import the finished products into Austria. Austria's chief sources of crude petroleum are Rumania, Poland and Russia.

LINE TO WHITE POINT FIELD

SAN ANTONIO, Tex., Oct. 3.—Houston Pipe Line Co., subsidiary of Houston Oil Co., is laying a line from the Refugio gas field in Refugio County on the Gulf Coast to the White Point gas field in San Patricio County, about 50 miles south. It is a 12-inch line and is an extension of the company's branch line which runs from Refugio Field north to the company's main gas line from Houston to Live Oak County and the Mirando Field in Webb County. The Refugio-White Point line parallels at a distance of about 80 feet the line of the Houston Gulf Gas Co.

PROGRESS ON DEL RIO LINE

SAN ANTONIO, Tex., Oct. 3.—Seven of the 25 tanks of 80,000 bbls. capacity to be built by the Mid-Kansas company at Del Rio are completed and work well progressed on 8 others and material is on the ground for the other 10. The Illinois Pipe Line Co.'s pipe line from the Yates Pool in Pecos to the Mid-Kansas tank farm at Del Rio, a total of 138 miles in length, is more than half done, 78 miles being completed and much of the ditch dug for the remainder and pipe strung. The talk is that the line should be completed by another three or four weeks.

FRANK B. LYONS DIES

PITTSBURGH, Pa., Oct. 1. — The death is announced of Frank B. Lyons, an old retired Eureka pipe liner, at Downs, W. Va. Mr. Lyons was born in Erie, Pa., October 28, 1864, and entered the service of the Southwest Pennsylvania Pipe Line Co. in September, 1890. He remained with the company in various capacities until March 31, 1920, when he was retired.

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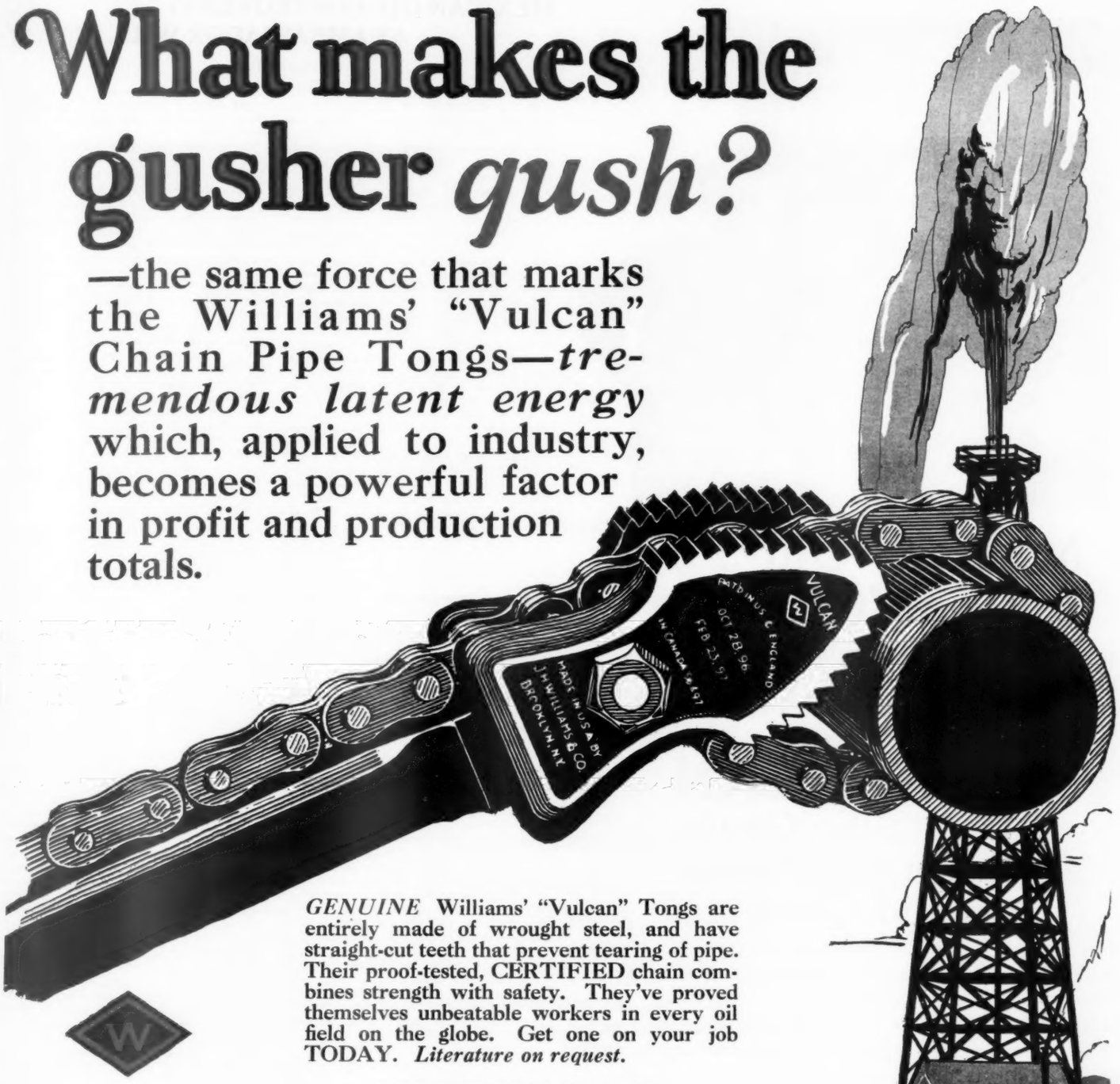

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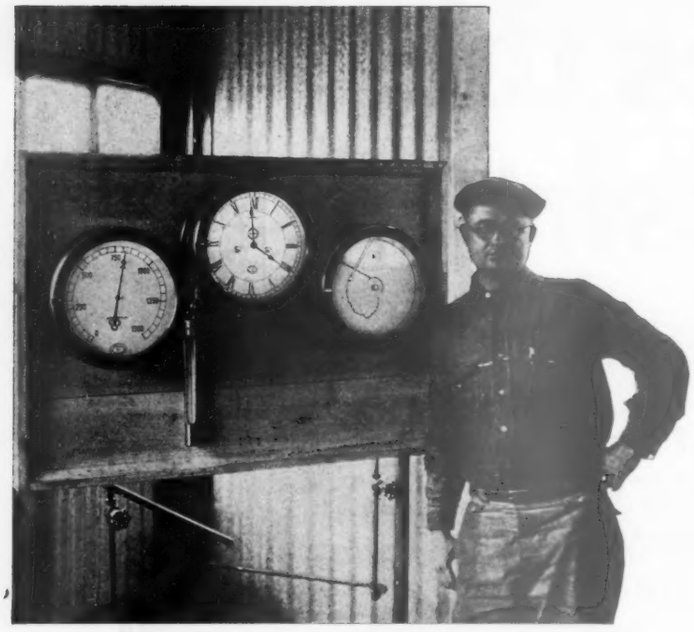

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MEXICAN OIL CONTROVERSY AS AMBASSADOR WILL FIND IT

By Charles E. Kern

WASHINGTON, D. C., Oct. 1.—The selection of Dwight W. Morrow as ambassador to Mexico and the hopes expressed that he may be able to compose the controversy over oil makes it timely to review the case as it stands on his appointment.

Men who are thoroughly versed in respect to the situation in Mexico affecting petroleum interests have recently passed through Washington, and have expressed their disappointment over the entire Mexican situation. Through these and other sources of authoritative information, the writer is able to state the exact condition that confronts operators of Mexican oil properties at the present time. When these conditions are known it can be seen that optimism in respect to the Mexican situation can hardly be entertained by anyone who seeks to face the facts with which the petroleum industry is confronted in Mexico.

As is well known the principal oil companies were successful in obtaining amparos or injunctions from district courts, staying enforcement of the petroleum law. This accomplishment resulted at the time in a feeling of encouragement that after all had been said about Mexico, there was relief to be had in Mexican courts.

It wasn't long, however, before these amparos were shown to be virtually useless, as there is no writ of mandamus in Mexican law to force the Department of Industry, Commerce and Labor to grant drilling and pipe line permits.

Deprived of Use of Property

As the Mexican government, in spite of the amparos granted from its own district courts, refused to grant such permits to companies which had not complied with the law, these companies were, in fact, deprived of the use of their property. The natural consequence was that the companies were forced to restrict their activities, as the wells which were producing before the petroleum law became effective, had become exhausted, and without new drilling the production of oil would gradually become impossible.

It can readily be seen that with such a system as this operating it will not be long before no oil can be produced in Mexico by a company which has not complied with the law. It must be remembered that to comply with the law means the abandonment of the original title to the property, and the substitution in its place of a registered lease from the Mexican government, taking way the attractive features of the title that these companies obtained when they went to Mexico, invested their money and began operations. In other words, this situation confirms the interpretation that was given by this Government to the acts of the Mexican government as one of confiscation.

These conditions leave the interests of American and other oil companies that have not complied with the new Mexican law suspended in the air and wholly dependent upon future negotiations that may be carried on by our Departmnt of State with the Mexican government through diplomatic channels. As far as anyone can see the powers of diplomacy have been well nigh exhausted, so that the oil companies obtained their amparos or injunctions from district courts are simply waiting to see what happens. The attitude of the supreme court of Mexico on collateral questions that have been brought before it is such as to offer little hope of relief.

Authority Challenged

It will be recalled that on April 27, 1927, the Association of Producers of Petroleum in Mexico, decided to instruct its Mexican representatives to proceed to drill wells on preconstitutional lands, that is lands owned, or on which leases were obtained, before May 1, 1917, regardless of whether permits were granted by the Mexican government. The purpose of this decision was an attempt to break the deadlock and bring the oil question to a head. That that attempt has proved to be fruitless is shown by the attitude of the Mexican government, because the government does not hesitate to use its military force to control the operations of oil companies.

In a letter from Secretary Morones to the Petroleum Agency at Tampico, in which a drilling permit was refused the Transcontinental Petroleum Co., the policy of the Mexican government of refusing drilling permits to companies which had not complied with the law, was made clear. At no time since the present Mexican attitude toward oil companies was initiated has the issue been stated more clearly and definitely than in this instance. In this letter Mr. Morones stated that, "because the company in question, not having requested confirmation of its rights to the land in the terms of Article 14 of the petroleum law, these rights are considered renounced and have no effect whatsoever against the Federal Government, in accordance with Article 15 of said law." Basing their action on an old decree of 1921 the Mexican government has also adopted the policy of fining those oil companies which drill without permits and of using federal troops if necessary to force the companies to discontinue operations.

Company Penalized

The Department of Industry, Commerce and Labor issued a statement, announcing that the Mexican Gulf Co. had been fined 40,000 pesos for drilling two wells in the Salina district. Recently the Mexican Gulf Oil Co. was again fined 20,000 pesos on the charge of drilling without permit. In this connection it was of interest to note that the Mexican Gulf Oil Co. was drilling an offset well to wells of the Petroleum Control Administration which is a government institution; hence it is seen that the Mexican Gulf Co., by governmental decree, through the levying of a fine, has been prevented from protecting its oil reserves from drainage by Mexican government operations.

In view of these facts it is seen how helpless these oil companies are in any attempt to break the deadlock by proceeding to drill wells on preconstitutional lands regardless of whether permits were granted by the Mexican government, which was the method adopted by the Association of Producers of Petroleum in Mexico as its one lingering hope that this controversy might be brought to a conclusion and a show down in the courts by such methods.

The Mexican supreme court is vaguely looked to at this time as the possible source of some relief for these oil companies that have obtained injunctions from district courts. However, a knowledge of the decrees and acts of the supreme court does not encourage such hope.

Supreme Court Action

On May 19 of this year the supreme court rendered a decision revoking the writ of suspension previously granted to the Mexican Gulf Oil Co., by the judge of the court of Villa Cuauhtemoc, against the exaction of the previsions of the petroleum law and its regulations. On that occasion the supreme court held that the permanent writ of suspension solicited by the company could not be granted in the absence of a positive act by the executive power jeopardizing the company's interest.

This action by the supreme court, combined with a public statement issued by the Department of Industry, Commerce and Labor, to the effect that the writ of suspension in question had been issued by the district judge "against the precedents established by the highest tribunals of the country, thus nullifying the just and legal action of this department," in revoking certain drilling permits, culminated in the resignation of the district judge, who publicly accused the Department of Industry, Commerce and Labor of endeavoring to dictate the findings of the court in so far as petroleum matters are concerned.

That same judge is quoted as having

(Continued on Page 115)

JENKINS CRACKING PROCESS

PRODUCES QUALITY GASOLINE

Facts from performance

MARKETING CONDITIONS
AND
CRACKING OPERATIONS

As market conditions shift the operator of a Jenkins Cracking Process can vary his operation to suit conditions which give him the greatest percentage returns.

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ANNOUNCEMENT

The Joseph Reid Gas Engine Company have designed and built a New Two-Cycle Gas Engine for the Oil Country, incorporating the following features:

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3. Replaceable main bearings.
4. Bored cross-head guide.
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6. New intake valve on top of cylinder.
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8. Detachable cylinder head.
9. Greater power and economy.
10. Unprecedented speed range.

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REID OIL FIELD MACHINERY

CRUDE OIL PRODUCTION THIS YEAR MAY POSSIBLY EXCEED 900,000,000 Bbls.

By James McIntyre

In the 12 months ending September 30, approximately 891,875,000 bbls. of crude oil was produced in the United States. Unless there are altogether unexpected slumps in the Seminole region and other flush fields between now and the close of the year, the production for 1927 should reach 907,000,000 bbls. and may greatly exceed that figure if West Texas operators see fit to drill for and produce the oil. At the beginning of the year various estimates on production for 1927 were made, none of them being below 875,000,000 bbls. and some as high as 900,000,000 bbls. None of the guessers were any too high.

The record for the 12 months ending August 31 is as follows:

	Month	Daily Av.
1926—		
September	66,755,817	2,194,338
October	70,664,189	2,225,194
November	70,649,706	2,354,990
December	73,823,829	2,381,414
1927—		
January	73,530,382	2,371,948
February	68,321,542	2,440,057
March	75,923,905	2,449,158
April	74,482,365	2,482,745
May	77,646,346	2,504,721
June	75,018,179	2,500,606
July	78,597,538	2,535,401
Augus.	77,605,125	2,503,390
Total	883,118,923	2,419,504

The peak production day for the United States is believed to have been July 30, the day on which Seminole hit its peak of 527,440 bbls. It is estimated that on that day 2,600,000 bbls. of oil was produced in the United States, or at the rate of 949,000,000 bbls. a year. The lowest point in production so far this year was in the first half of January when it registered about 2,370,000 bbls. in one day. Between the low and the high was a difference of 230,000 bbls. a day.

The production for August averaged 2,503,390 bbls. a day. In August, 1926, the daily average was 2,194,338 bbls., showing an increase in August this year of 309,052 bbls. a day. In August, 1925, the daily average was 2,147,158 bbls.; in August, 1924, 2,051,718 bbls., and in August, 1923, 2,194,814 bbls.

Following is the production by pool in the Kansas, Oklahoma, Texas, Louisiana and Arkansas areas in August and a summary of production by state in the United States for the same month:

SUMMARY BY PRODUCING DIVISIONS
Crude Oil Production, in Barrels, in August, 1927

Mid-Continent Fields

	Daily Av.	Month
Kansas	110,470	3,424,570
Oklahoma	847,850	26,283,350
North Texas	96,568	2,993,608
Central Texas	51,553	1,598,143
West Texas	137,284	4,255,804
Panhandle Texas	99,090	3,071,790
East Central Texas	30,989	960,659
Arkansas	104,600	3,242,600
North Louisiana	56,389	1,748,080
Total August	1,534,793	47,578,604
Total July	1,542,956	47,831,636
Difference	8,163	253,032

Gulf Coast and Southwest Texas

	Daily Av.	Month
Gulf Coast (Texas-La.)	138,771	4,301,901
Southwest Texas	31,779	985,149
Total August	170,550	5,287,050
Total July	175,428	5,438,268
Difference	4,878	151,218

Production by States

	Daily Av.	Month
Kansas	110,470	3,424,570
Oklahoma	847,850	26,283,350
Texas	571,459	17,715,229
Arkansas	104,600	3,242,600
Louisiana	70,964	2,199,905
Total August	1,705,343	52,865,633
Total July	1,718,384	53,269,904
Difference	13,041	403,271

Production of the United States

	Daily av.	Month
Oklahoma	847,850	26,283,350
California	621,907	19,279,131
Texas	571,459	17,715,229
Arkansas	104,600	3,242,600
Kansas	110,470	3,424,570
Louisiana	56,389	1,748,080
Rocky Mountain	81,615	2,530,065
Eastern fields	109,100	3,382,100
Total August	2,503,390	77,605,125
Total July	2,535,401	78,597,538
Difference	32,011	992,413

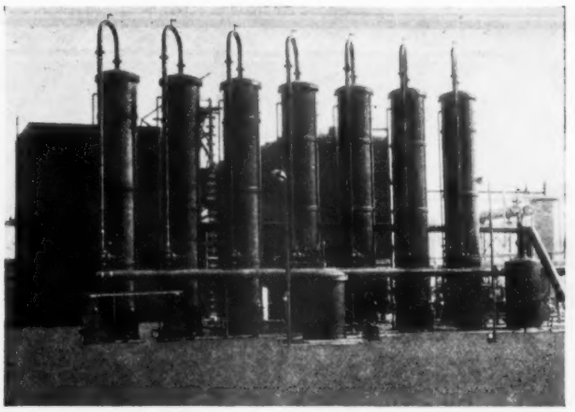
KANSAS
Daily Average and Total Monthly Production in August, 1927

Marion County—

	Daily av.	Month
Florence	745	23,095
Peabody	1,346	41,726
Covert-Sellers	761	23,591
Lost Springs	200	6,200
Total	3,052	94,612
Butler County		
Elbing	2,460	76,260
Potwin	400	12,400
Cameron-Robinson	616	19,096
Wilson-Dunkle	1,448	44,888
Towanda	2,655	82,305
Fox-Bush	1,242	38,502
Nuttle-Koogler	1,950	60,450
Eldorado	7,801	241,831
Smock	224	6,944
Leon-Weaver	3,763	116,653
North Augusta	1,194	37,014
South Augusta	1,760	54,560
Sluss	347	10,757
Benton	66	2,046
Douglas	127	3,937
Keighly	2,256	69,936
Eastern Butler	1,228	38,068
Total	29,537	915,647
Greenwood-Woodson Counties—		
Sallyards	1,381	42,811
Teeter-Pixley-Scott	10,257	317,967
Virgil	5,257	162,967
Thrall-Burkett	2,546	78,926
Seely	9,756	302,436
Polhamus	1,340	41,540
Miscellaneous	2,441	75,671
Total	32,978	1,022,318
Cowley County—		
Rainbow Bend	2,097	65,007
Slick	1,011	31,341
Graham	565	17,515
Rock (Twp. 30-4)	260	8,060
Clark (Twp. 31-5)	219	6,789
Eastman (Twp. 30-6 and 31-6)	733	22,723
Winfield-New Salem (Twps. 32-4 and 32-5)	3,667	113,677
Miscellaneous	696	21,576
Total	9,248	286,688
Other Counties—	Daily av.	Month
Reno	26	806
Sumner	15,441	478,671
Rice	1,983	61,473
Russell	2,558	79,298
Kingman	17	527
Harvey	57	1,767
Chautauqua	2,402	74,462
Elk	2,202	68,262
Montgomery	1,313	40,703
Wilson	231	7,161
Allen	619	19,189
Neosho	30	930
Lyon	1,635	50,685
Miami	2,959	91,729
Franklin	495	15,345
Douglas	69	2,139
Bourbon	16	496
Woodson	1,170	36,270
Linn	221	6,851
Anderson	1,876	58,156
Coffey	285	8,835
Labette	50	1,550
Total August	35,655	1,105,305
Total July	110,470	3,424,570
Difference	111,422	3,454,082
	952	29,512

OKLAHOMA
Daily Average and Total Monthly Production in August, 1927

	Daily av.	Month
Washington County	5,977	185,287
Nowata County	4,655	144,305
Rogers County	1,697	52,607
Osage and Eastern Kay Counties—		
Burbank	39,911	1,237,241
Osage, outside Burbank	29,900	926,900
Total	69,811	2,164,141
Tulsa County—		
Bird Creek, Owasso, etc.	3,704	114,824
Red Fork, Sand Springs, Bruner, Turkey Mountain and Fisher	3,825	118,575
Bixby, Leonard and Jenks	2,544	78,864
Broken Arrow and Coweta	1,108	34,348
Total	11,181	346,611
Okmulgee, Muskogee and North Okfuskee Counties		
Mounds, Beggs, Hamilton Switch, Youngstown	8,288	256,928
Bald Hill and Haskell	3,231	100,161
Morris, Boynton and Cole	2,935	90,985
Okmulgee	2,405	74,555
Tiger Flats, Henryetta, Schulter and Bartlett	2,042	63,302
Total	18,901	585,931
Okfuskee, Seminole and Hughes Counties		
Seminole City	77,560	2,404,360
Earlsboro	178,280	5,526,680
Searight	29,920	927,520
Bowlegs	170,690	5,291,390
Little River	14,400	446,400
Total Seminole	470,850	14,596,350
Deaner Lyons	3,296	102,176
Wewoka	15,690	486,390
Cromwell	12,119	375,689
Papoose-Gilcrease	6,441	199,671
Weleetka	1,023	31,713
Holm-Jarvis	1,177	36,487
Yeager	629	19,499
Miscellaneous	1,554	48,174
Total	512,779	15,896,149
Creek County—		
Cushing-Shamrock	18,792	582,552
Glenn Pool, Sapulpa and Kiefer	7,901	744,931
Bristow, Gellyville and Depew	20,241	627,471



Campbell records are unparalleled

The above view shows a battery of seven Campbell Oil-Froth Absorbers built for 400 pounds working pressure at the World's largest stripper plant. The entire plant is a Campbell installation.

Campbell Absorbers are also used at the World's largest gasoline plant with a capacity of 144,000,000 cubic feet of natural gas per day.

Over one million gallons of gasoline are daily produced by our Absorbers, estimated to be approximately one-fourth the entire production of natural gasoline in the U. S.

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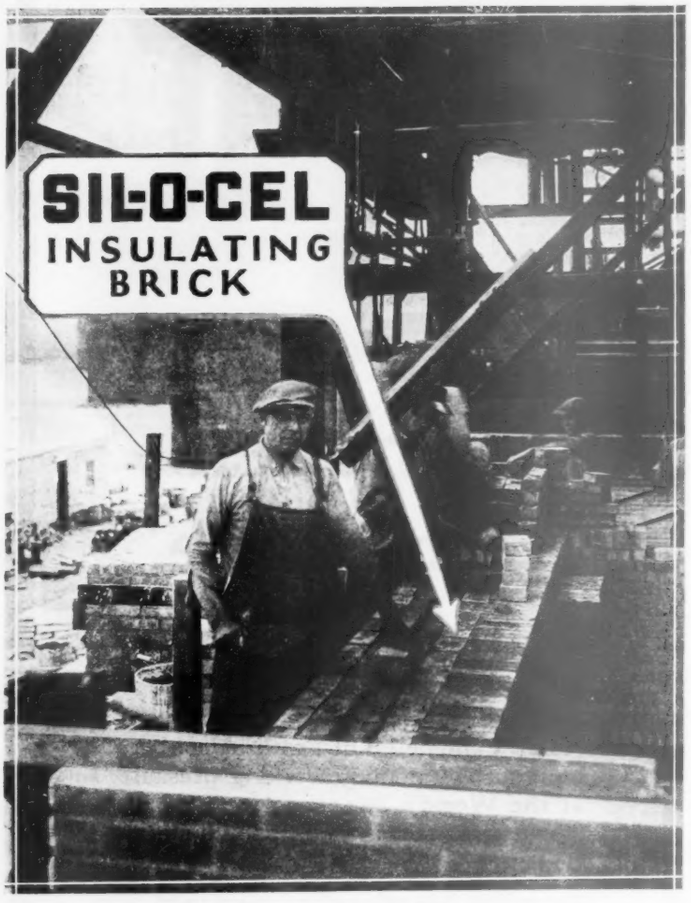
CAMPBELL OIL FROTH absorber

SIL-O-CEL Insulating Brick

Lay up in a furnace wall just like fire brick



Building an insulated furnace for the Jenkins Cracking Process in the plant of Bartles Maguire Oil Company, East Chicago, Indiana.

It is easy to insulate a furnace wall with Sil-O-Cel brick.

These insulating units are installed between the firebrick and the outer red brick or concrete wall where they fit in place exactly like a course of firebrick.

Their proportions are the same as firebrick and they lay up in the same manner, with thin rubbed joints, so that they can easily be bonded to firebrick.

SIL-O-CEL

The insulating value of Sil-O-Cel Brick, inch for inch, is seven to ten times that of average firebrick.

One course of Sil-O-Cel C-22 brick, (4½ inches), is used ordinarily behind nine inches of firebrick in the walls of cracking furnaces to reduce radiation losses and to protect the concrete foundations from spalling temperatures.

This insulation will repay its entire cost in fuel savings within ten or twelve months of average service. It never deteriorates in insulating value. When equipment is dismantled it can usually be salvaged with very little loss.

Write our nearest Division Office for a sample Sil-O-Cel brick and our 190-page handbook on heat insulation.

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Celite Products Corporation, Westminster, London, England

	Daily Av.	Month
North Bristow and Pickett Prairie	4,942	153,202
Eastern Bristow or Slick	4,512	139,872
Total	56,388	1,748,028
Pawnee County—		
Cleveland	3,204	99,324
Keystone	2,827	87,637
Jennings	3,254	100,874
Otoe or Watchorn	1,499	46,469
Maskam	35	1,085
Ralston	165	5,115
Total	10,984	340,504
Payne County—		
Yale, Quay and Ingalls	5,137	159,247
N. Cushing or March Pool	4,117	127,627
Deep Rock (23-18-3)	2,495	77,345
Total	11,749	364,219
Lincoln County—		
Stroud	1,239	38,409
Davenport	3,096	95,976
Kendrick	543	16,833
Total	4,878	151,218
Kay, Grant and Noble Counties—		
Blackwell	1,268	39,308
Otstot	1,165	36,115
Vernon	826	25,606
Deer Creek	898	27,838
Ponca City	339	10,509
Mervine	336	10,416
North Braman	3,165	98,115
South Braman	2,569	79,639
Hubbard	4,687	145,297
Thomas	4,638	143,778
Tonkawa	20,850	646,350
Billings	236	7,316
Miscellaneous	3,236	100,316
Total	44,213	1,370,603
Garfield County—		
Garber	11,737	363,847
Carter County—		
Healdton	15,189	470,859
Hewitt	9,531	295,461
Graham	5,048	156,488
Fox	3,765	116,715
Brock	1,041	32,271
Tussy or Scholem Alechem	16,511	511,841
Total	51,085	1,583,635
Stephens-Cotton Counties—		
Loco-Milroy	2,296	71,176
Comanche	773	23,963
Duncan	5,478	169,818
Walters	941	29,171
Kilgore	245	7,595
Total	9,733	301,723
Jefferson County—		
Hambro	1,767	54,777
Caddo County—		
Cement	1,927	59,737
Garvin County—		
Robberson	2,433	75,423
Grady County—		
Knox	8,673	268,863
Beckham County—		
Sayre	62	1,922
Pontotoc County—		
Allen, Lloyd and Francis	2,295	71,145
Pottawatomie County—		
Pearson	3,957	122,667
Maud	823	25,513
Total	4,780	148,180
Marshall County—		
Madill	145	4,495
Total August	847,850	26,283,350
Total July	855,566	26,522,546
Difference	7,716	239,196

NORTH AND CENTRAL TEXAS
Daily Average and Total Monthly Production in August, 1927

North Central Texas—		
Burkburnett	12,142	376,402
Electra	13,653	423,243
Iowa Park K. M. A.	3,711	115,041
Archer County	24,852	770,412
Clay County	570	17,670
Wilbarger	11,463	355,353
Montague County	10,842	336,102
Young County	12,950	401,450
Baylor County	89	2,759
Cooke County	6,284	194,804
Foard County	12	372
Total	96,568	2,993,608
Central Texas—		
Stephens County	8,284	256,804
Eastland County	9,000	279,000
Brown County	18,135	562,185
Calahan County	4,105	127,255
Coleman County	1,204	37,324
Comanche County	171	5,301
Throckmorton County	1,361	42,191
Jack County	790	24,490
Palo Pinto County	484	15,004
Shackelford County	5,742	178,002
Erath County	331	10,261
Jones County	1,946	60,326
Total	51,553	1,598,143
West Texas—		
Reagan County	20,681	641,111
Mitchell County	3,969	123,039
Winkler County	3,149	97,619
Howard County	3,489	108,159
Scurry County	52	1,612
Upton-Crane Counties	98,636	3,057,716
Crockett County	1,448	44,888
Glasscock County	34	1,054
Loving County	44	1,364
Pecos County	5,768	178,808
Ector County	14	434
Total	137,284	4,255,804
Panhandle—		
Carson County	9,422	292,082
Hutchinson County	77,830	2,412,730
Moore County	43	1,333
Wheeler	1,582	49,042
Gray	10,169	315,239
Potter	44	1,364
Total	99,090	3,071,790
East Central Texas—		
Powell	15,212	471,572
Mexia	9,639	298,809
Nigger Creek	1,826	56,606
Currie	662	20,522
Richland	783	24,273
Wortham	2,867	88,877
Total	30,989	960,659
Total all fields, August	415,484	12,880,904
Total all fields, July	409,579	12,696,949
Difference	5,905	183,955

NORTH LOUISIANA
Monthly Production for August

	Daily av.	Ttl. Month
Caddo	22,507	697,730
Homer	4,800	148,800
Haynesville	7,292	226,066
DeSoto-Red River	4,015	124,465
Elm Grove	655	20,305
Bellevue	1,225	37,975
Cotton Valley	5,415	167,865
Urania	9,645	298,995
Pleasant Hill	835	25,885
Total August	56,389	1,748,080
Total July	56,496	1,751,376
Difference	107	2,296

ARKANSAS
Monthly Production for August

	Daily av.	Ttl. Month
El Dorado	5,780	179,180
Lisbon	3,340	103,540
Smackover	91,910	2,849,210
Stephens	1,280	39,680
Nevada	2,180	67,580
Bradley	110	3,410
Total August	104,600	3,242,600
Total July	109,893	3,406,682
Difference	5,293	164,083

GULF COAST
Daily Average and Monthly Production in August, 1927

District—	Daily av.	Month
Boling	2,019	62,589
Batson	1,293	40,083
Blue Ridge	3,014	93,434
Barber Hill	919	28,489
Big Creek	3,116	96,596
Damon Mound	867	26,877
Dayton	327	10,137
Edgerly (La.)	2,163	67,053
Goose Creek	7,904	245,024
Humble	4,325	134,075
Hull	14,914	462,334
High Island	185	5,735
Jennings (La.)	1,066	33,046
Lockport (La.)	5,681	176,111
Markham	387	11,997
Nash	977	30,287
Orange	5,101	158,131
Orchard	81	2,511
Pierce Junction	6,460	200,260
Piedras Pintas	100	3,100
Spindletop	54,144	1,678,464
Saratoga	1,147	35,557
Sour Lake	4,349	134,540
South Liberty	2,703	83,793
Vinton (La.)	5,640	174,840
West Columbia	8,863	274,753
Welsh-Anse La Bute (La)	25	775
*Miscellaneous	1,010	31,310
Total August	138,771	4,301,901
Total July	142,985	4,432,535
Difference	4,214	130,634

*Includes Nacogdoches, Washington Counties, Kleberg County and scattered.

SOUTHWEST TEXAS
Daily Averave and Monthly Production in August, 1927

Field—	Daily av.	Month
Luling	16,244	503,564
*Mirando	11,400	353,400
Somerset	1,082	33,542
Calliham	24	744
Rockdale-Minerva	1,063	32,953
Lockhart	1,966	60,946
Total August	31,779	985,149
Total July	32,443	1,005,733
Difference	664	20,584

*Includes Webb, Jim Hogg and Zapata Counties.

POSSIBILITIES OF OIL IN ALASKA TERRITORY

(Continued from Page 73)

has been thrown into a succession of folds whose axes run about north 30 degrees east. One of the principal anticlines follows the valleys of Bowser and Fitz Creeks. This anticline divides into two minor anticlines in the north end of the Fitz Creek Valley and flattens out toward the south end near Oil Bay, apparently losing its identity beneath the southward-dipping beds of Mount Pomeroy. Possibly there are minor folds on the east flank of this anticline between Park Creek and the head of Brown Creek.

The other anticline, which extends through the Portage Creek Valley, is a closely compressed fold and is cut off on the north by a fault that crosses its axis at an acute angle. It would seem that the anticline of the Fitz and Bowser Creek Valleys and the seaward-dipping beds along Cook Inlet furnish structural conditions that would favor the accumulation of oil, because the anticline and its broad eastern limb provide both a reservoir and a drainage area. The storage of oil in the anticline would necessarily depend further on the presence of beds capable of holding oil and on a capping of beds that would prevent its escape.

80% Overall Efficiency

Engineers of a large Texas producing company report, after exhaustive tests, that the overall mechanical efficiency, from the motor to the polish rod, of a pumping set up using a Nuttall Double-Reduction Pump Gear Unit is 80%. Under the same tests a worm type gear unit gave an efficiency of 65%.

Nuttall Pump Gear Units are the product of the largest industrial gear manufacturers in the United States, and are designed and built by an organization which has been a leader in the gear cutting field for forty years.

Nuttall Pump Gear Units will enable you to reduce your power and maintenance costs and at the same time pump more oil.

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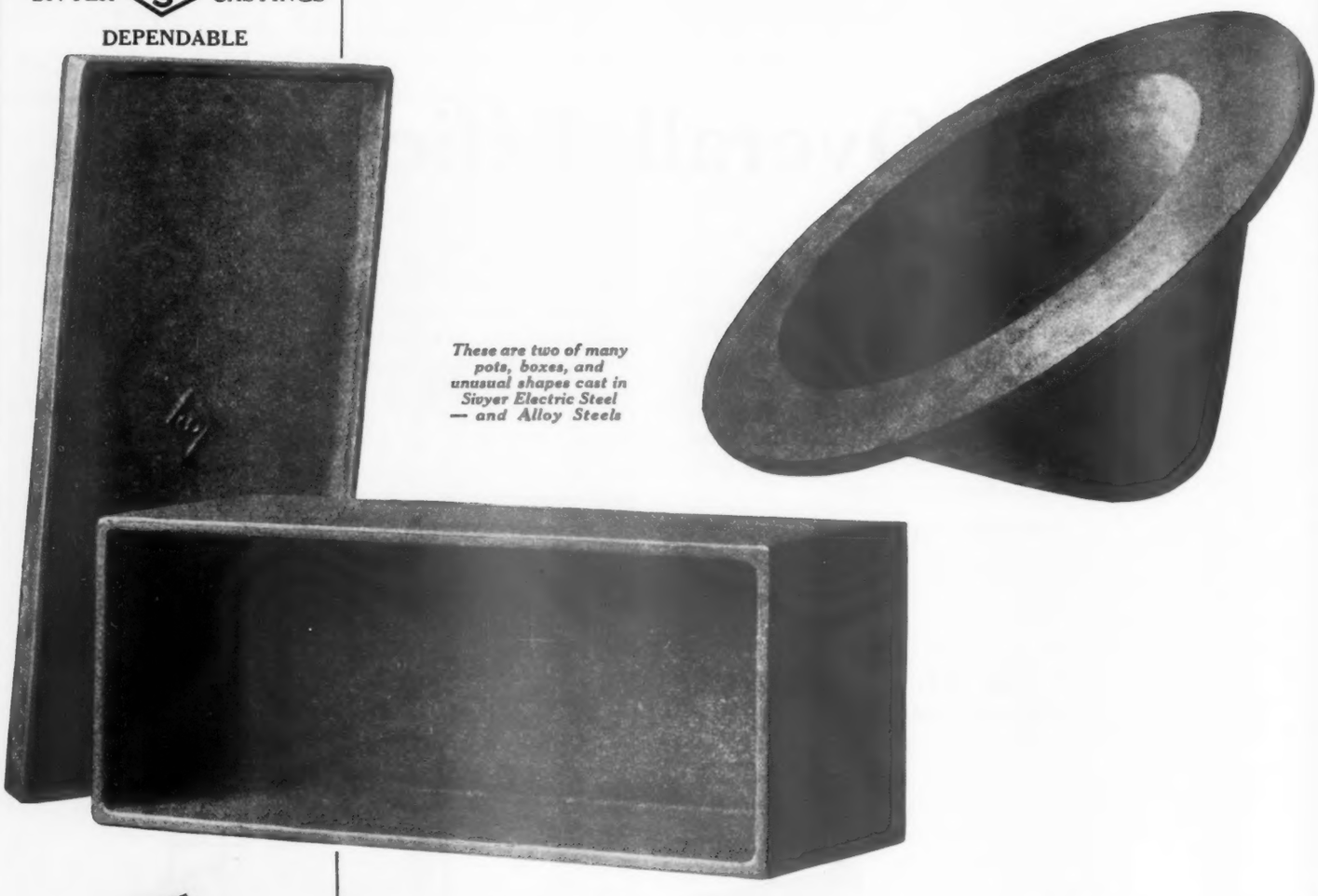
OIL WELL SUPPLY CO., *Authorized Distributor*

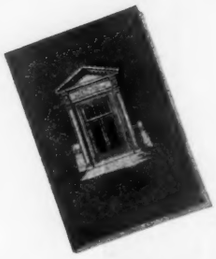
Nuttall

SIVYER (S) CASTINGS

DEPENDABLE



These are two of many pots, boxes, and unusual shapes cast in Sivyer Electric Steel — and Alloy Steels



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Casting Pots, Boxes and Unusual Shapes to Exacting Limits

Among the many intricate patterns cast by Sivyer, the above case hardening box may look simple and ordinary. But, in foundry work no job can be regarded as simple and easy—lest it be slighted for the more interesting problems of difficult patterns. It is significant that Sivyer casts so many pots, boxes, and unusual shapes—many quite simple in appearance—for a wide variety of uses. Perhaps it means that this thought "No job is too simple for Sivyer"— should be added to the common trade saying that "No job is too difficult for Sivyer."

SIVYER STEEL

SIVYER STEEL CASTING COMPANY, MILWAUKEE

MEXICAN CONTROVERSY AS DWIGHT TAKES HOLD

(Continued from Page 108)

further stated that he saw himself obliged to issue writs of suspension in the interest of the social welfare of the community, as otherwise the petroleum activities would have been suspended and "the towns in the petroleum region would have been left in a critical situation and possibly the danger of an American invasion would have been more imminent."

May Ignore Court

It may readily be questioned whether the Department of Industry, Commerce and Labor would obey the instructions of the supreme court when it is seen how completely it denied the decision of its district court. In other words, it becomes questionable whether the courts of Mexico are to have any dependence placed on them by oil companies operating in Mexico and whether it is not a fact that the arbitrary mandates of the government are to prevail as supreme over any legal power that it is possible to exercise in that country through its judiciary system.

Under the conditions outlined, the Association of Producers of Petroleum in Mexico had no alternative except compliance with the mandates of the Department of Industry, Commerce and Labor, and therefore decided, and did, instruct member companies not to proceed with drilling unless permits were issued. In taking this action the Association of Producers of Petroleum in Mexico, made no statement in respect to its reasons, but to anyone familiar with the circumstances that brought about its action, its reasons were nothing less than a compliance with overpowering intimidation by the government of Mexico, which insists, and doubtless can exercise, the power of using federal troops to make the threat good.

No one in Mexico has any knowledge as to when, if ever, the supreme court of Mexico will render a decision on the appeals taken from the writs of amparo, granted or refused, as the case may be, by district courts. When the supreme court does decide to act, its decision, if it ever takes place, doubtless will depend largely upon domestic and international developments in the meantime.

Must Depend on Diplomacy

The situation that now confronts the Mexican oil industry that has not complied with the terms of the law, which many companies regard as confiscatory, indicates that the present is a most opportune time for the administration through diplomatic channels to assist in bringing about a recognition of the rights of American oil companies.

In this situation there is a new element, which is whether American companies operating in Mexico are not entitled at least to an interpretation of the law and the actions they may bring before its courts by judicial decision. This is really entirely apart from the merits of the case that have been considered in the past. The Mexican government has insisted that its acts have been legal, in conformity with international law and harmonious with the decisions of its own supreme court. Now the question arises whether these oil companies have not a right to have their case going from the district court to the supreme court decided by this court of highest appeal, and whether it is possible, under the Mexican system, to permit the overriding of the courts by government mandates.

It seems clear that the Mexican government itself could not maintain such a proposition and that it must concede the right of American citizens to have their cases judicially determined by the Mexican courts as the least that should be accorded them.

SOUTHWEST TEXAS

(Continued from Page 51)

cor., is fishing at 1,035 feet. The Texas Company's No. 3 Beatty, Nich Kelly Survey, 150 feet to southeast and southwest lines of lease has derrick up; No. 1 Lackey, Nich Kelly Survey, 150 feet to northeast and northwest lines of lease, is swabbing 30 bbls; No. 2 Lackey, Nich Kelly Survey, 450 feet to northeast lines of lease and survey and 150 feet to northwest lines of lease, is rigging up; No. 3 Lackey, Nich Kelly Survey, 750 feet to northeast lines of lease and survey and 150 feet to northwest lines of lease, topped chalk at 2,145 feet and is standing. Humble Oil & Refining Co.'s No. 1 Clingensmith, Squire Damon Survey, 750 feet to southeast lines of survey and 150 feet to southwest lines of lease, drilling in Serpentine at 2,059 feet, topped at 1,920 feet with good oil showing; No. 2 Clingensmith, Square Damon Survey, 750 feet to southeast lines of lease and survey and 150 feet to southwest lines of lease, is drilling at 400 feet; No. 4 Clingensmith, Squire Damon Survey, 150 feet to southeast lines of survey and 150 feet to southwest lines of lease, is rigging up. William F. Morgan, Inc.'s, No. 1 Osteen, W. C. Swearingen Survey, 150 feet to northwest lines of survey and 150 feet to southwest lines of lease, at 2,217 feet is bailing some oil, test not complete; No. 1 Moore, G. Jasper Gilbert Survey, 150 feet to northwest lines of tract and 150 feet to northwest line of Moore lease, is standing at 2,222 feet. Wheelock & Collins' No. 1 Beatty, Nich Kelly Survey, is location 150 feet to C SEL; No. 2 Beatty is location 300 feet northwest of No. 1; No. 2 Beatty is location 300 feet northwest of No. 2; No. 3 Beatty is location 300 feet northwest of No. 3.

Luling Field

Magnolia Petroleum Co.'s No. 15 G. Proctor, John Henry Survey, NE cor., is drilling at 1,800 feet. North & South's No. 1 Kelly is drilling at 7,120 feet; No. 2 Tiller is drilling at 6,650 feet.

Refugio Gas Field—Refugio

Houston Oil Co.'s No. 2-A Rokke is drilling at 2,600 feet. Houston Gulf Gas Co.'s No. 3 W. Heard, Refugio Survey, 150 feet to west line and 1,840 feet to south line, has set surface casing at 400 feet; No. 2 Moody is drilling at 1,450 feet.

Adams Gas Field—Medina

Mid-Kansas Oil & Gas Co.'s No. 2 Nixon, Survey 13¾, is location. Witherspoon Oil Co.'s No. 1 Fasseler, Survey 799, located 550 feet to east line of lease and survey and 1,350 feet to south line of lease and survey, last week tested about 1 bbl. at 50 feet in chalk at 1,360-1,410 feet, and is being deepened, with the oil 27 gravity; No. 4 Nixon, 20 feet north of No. 2, the wild gasser in Survey 119, at 193 feet is trying to pump in water as No. 2 is now on fire.

Kingsville Field—Kleberg

Houston Oil Co.'s No. 1 Kissman, Section 41, Block 9, total depth 3,200 feet, is plugging back to test sand at 1,950 feet. Humble Oil & Refining Co.'s No. 4 Kleberg, Section 40, Block 6, at 3,062 feet is making few barrels of oil and lots of salt water; No. 2 Sexauer, Section 41, Block 11, a gas well at 1,957 feet, which came in wild and was later mudded off and under control, is losing returns.

CANADIAN FIELDS

(Continued from Page 55)

naphtha from the Madison limestone at 3,858 feet.

Great West Oils' No. 1, SE Section 7-20-2w5, is working with a milling tool on the top of the tools stuck in the string of casing at 2,000 feet. Fishing will be resumed as soon as the milling is finished. The hole is at 5,370 feet.

Stockmen Oils' No. 1, LSD 1-2, Section 27-20-3w5, is installing a new cable preparatory to resuming drilling at 5,300 feet.

McLeod Oil Co.'s No. 1, LSD 16, Section 1-20-3w5, is drilling at 2,490 feet and carrying down 8¼-inch casing. McLeod No. 3, same LSD, is pumping about 38 bbls. a day of 55-degree crude from the Dakota sand at 3,200 feet. McLeod No. 2, same LSD, is making 50 bbls. a day of 73-degree naphtha from the Madison limestone at 4,363 feet. No. 1 will be deepened to the Madison.

Deepest Hole in Field

British Dominion Oil Corp., LSD 4, Section 5-20-2w5, is running 6¾-inch casing to the bottom of the hole at 5,990 feet, after drilling through a big caving. The test will start making new hole in a few days. It is the deepest hole in the field and located at a low point on the structure, but at the present depth seems to be close to the Madison limestone, so that the producing horizon may be got in a few hundred feet more of drilling. It is especially interesting as a test of the Madison at a low point on the structure. Royalite No. 4, the pioneer crude naphtha producer, in LSD 12, Section 7-20-2w5, got its production in the Madison at 3,470 feet, after drilling several hundred feet into that formation; so that in the comparatively short distance between these two wells the dip in structure is very marked.

Spooner Oils' No. 1, LSD 12, Section 13-20-3w5, is running 6¼-inch casing to 4,612 feet. Before running casing, a considerable accumulation of heavy green crude was bailed from the hole; though the showing encountered at this depth is not sufficient for commercial production. Vulcan Oils' No. 2, LSD 11, Section 13-20-3w5, is drilling in the Kootenays at 3,650 feet.

New Valley Oil Co., LSD 4, Section 6-21-2w5, has resumed drilling at 2,050 feet after installing oil burners to operate the plant. Crude oil from the Canada Southern refinery in the Turner Valley is being used for fuel.

Seneca Oils, LSD 1, Section 34-20-3w5, is drilling at 2,750 feet with 10-inch casing at 2,734 feet. Dolomite Oils, LSD 8, Section 1-20-3w5, is at 1,850 feet and running 12½-inch casing. Calmont Oils, LSD 2, Section 1-20-3w5, is at 4,170 feet and running 8¼-inch casing. It is planned to carry this string to 4,500 feet if possible.

Advance Oil Co.'s No. 5 is erecting a derrick close to Home Oil Co.'s No. 1 producer in LSD 10, Section 20-19-2w5. McLaren Oil Co. has been confirmed in possession of surface rights on its drilling site in LSD 3, Section 3-20-3w5, in the Black Diamond section of the Turner Valley Field; and is reported commencing work on derrick.

Reorganization of Mid-West Co.

In connection with the proposed reorganization of the Mid-West Oil Co., a suit has been brought by James B. Paterson and John M. Mason to set aside the merger of the Western Pacific Oil Co. and the Northwestern Pacific Oil Co. in the present Mid-West Oil Co. The two original companies were formed at the time of the Calgary boom in 1913-14, and after doing some drilling a merger was effected, the reorganization becoming the present Mid-West Oil Co. The latter continued the drilling operations of both companies, Mid-West No. 1, LSD 8, Section 31-19-2w5, being ultimately abandoned at 3,780 feet and Mid-West No. 2, LSD 3, Section 24-20-3w5, being carried to 3,740 feet before operations were discontinued. They were at that time among the deepest tests in the Turner Valley Field, and it is claimed that considerable oil showings were encountered, but owing to drilling difficulties neither test was apparently carried to the Madison limestone formation.

Some years after the Mid-West discontinued active work, control of the company was secured by the Southern Alberta Oil Co. interests, headed by William Livingston. When the latter company was taken over by the present Dalhousie Oil Co., an Imperial Oil, Ltd., subsidiary, the Dalhousie Oil Co. also acquired control of the Mid-West. Recently plans were worked out for a reorganization of the Mid-West Oil Co. with a reduced capitalization, and a tentative site was selected for Mid-West No. 3 in LSD 13, Section 12-20-3w5. Owing to the litigation no further work has been done.

In the Highwood district, west of Nanton, Imperial Oil, Ltd., Highwood No. 1, LSD 3, Section 36-18-3w5, is reported drilling at 3,340 feet.

Equipment Warehouse

Imperial Oil, Ltd., is erecting a warehouse at the north end of the town of Okotoks, the nearest rail point to the Turner Valley Field, for the storage of drilling equipment. A 1,000-foot siding is being put down, while the C. P. R. is running a spur to the plant.

In the Irma-Wainwright Field, east central Alberta, Interior Oil Co., Section 36-44-7w4, is at 1,912 feet and drilling with a heavy gas pressure and considerable showings of oil. This test is fairly close to Wainwright and some distance from the heavy crude producers in the British Petroleums section of the field. Mid-Canada Oil Co., Section 35-45-6w4, has spudded in with Pat Adams in charge. Two large storage tanks have been moved out to the well. Frank Ulmer, vice president of the company, is field manager, with W. B. Moffatt as president and general manager of the company.

A number of delegates to the Imperial Mining and Metallurgical Congress at Edmonton visited the Wainwright Field. Among the experts accompanying the visitors were Dr. T. B. Williams, consulting geologist; T. G. Madgwick, William Calder and C. W. Dingman of the Federal Department of the Interior at Calgary; L. H. Miller, manager of Ribstone Oils, Ltd., and Dr. G. S. Hume of the Geological Survey of Canada.

In the Moose Mountain Field near Calgary, Signal Hill Oil Co.'s No. 2, LSD 9, Section 34-23-5w5, is hauling additional 10-inch casing to the well, preparatory to resuming drilling at 1,450 feet.

On the Morley Indian Reserve, Gold Coin Oils' diamond drill test is at 3,586 feet and drilling, after encountering two additional flows of gas. The Watson Oil Co. of Vancouver, B. C., has taken over 320 acres in the Morley Reserve area, part in the Nat and George Lea acreage and part from the Cobb & Warren Chiniki Holding Co.'s acreage. The company will start work at once on a location about 4 miles southwest of Ozada station on the main line of the C. P. R. No. 1 test will be put down with a diamond drill outfit. Comparatively shallow drilling, about 1,000 feet, is anticipated; indications being that the Benton shale and most of the Dakota sand have been eroded, which would bring the top of the Madison limestone within 1,000 feet of the surface. Production is looked for in the Madison.

Border Areas

In the Border areas, Gas Production & Transportation No. 1, NE Section 21-4-18w4, near Warner, is practically rigged up and will resume work early in October. The drill was at 410 feet when the old derrick was burned. In the Foremost Field, Canadian Western Natural Gas Co.'s No. 8, LSD 12, Section 5-6-10w4, is reported on top of the gas sand at 2,220 feet and cementing the casing before drilling into the sand.

In the Pincher Creek district, southwestern Alberta, Mount Royal Oil & Gas Co.'s No. 1, LSD 4, Section 7-6-1w5, is reported to have finished setting the 15-inch casing and resumed drilling at 250 feet. The plant has been shut in for the winter, and will run double tour.

In the Skiff Field, Devenish Petroleum, LSD 5, Section 27-5-14w4, is at 3,130 feet and working on casing. Illinois-Alberta Oil & Refining Co. of Calgary has secured acreage from Devenish Petroleum and will put down a test.

Tar Sand Development

Operations in the Athabaska tar sand district are being continued and it is stated by Dr. S. C. Ells, field engineer of the Federal Department of Mines, that the production of tar sands has been established on a commercial basis to compete with asphalt as a road-building material. Since 1897 the tar sand deposits for 200 miles beyond McMurray have attracted a great deal of attention in America and Europe and have been subjected to numerous experiments. In recent years many processes tried out have proved successful on an experimental scale, but not commercially feasible.

A system worked out by Doctor Ells has been the basis of recent development of the tar sands for paving material; and pavements have been successfully laid in northern Alberta. The Ells plant contains an internally-heated mixer similar to those employed on rock asphalt in various parts of the United States. In the construction of the paved roadway at Jasper Park this plant worked for over three months without repairs. Doctor Ells states that even with the present

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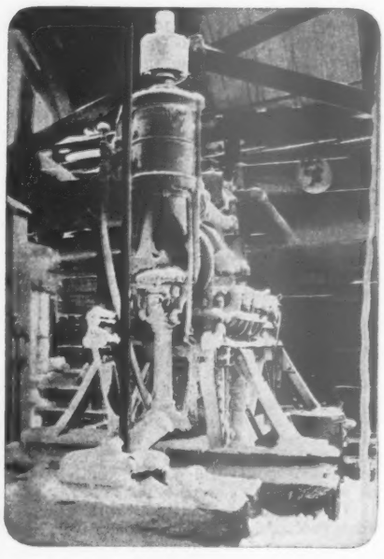
Diamond Drill Solves Problem at Calgary



Shallow production has been common for 12 years in the Turner Valley Field, Alberta, Canada—but until recently it has never been possible to drill into the high pressure gas production below the cap rock, and successfully complete a well.

Terrific gas pressure and hard limestone made a double problem. Rigs that could stay in the hole couldn't cut the rock—and rigs that could cut the rock couldn't stay in the hole.

Three different wells were drilled into the pressure, estimated at 2500 lbs. to the inch—and in each case the tools were blown up in the hole and lost. Rapid expansion of the gas froze things up and handicapped fishing.

Until a few months ago not one well had been successfully completed—then the Illinois Alberta Oil Company solved the problem with a diamond drill. Boring down to a depth of 3500 feet with an ordinary rig, they reached the lime. To cut the hard lime and handle the gas pressure they substituted a "P-2" Sullivan Diamond Drill.

The diamond drill bored rapidly down through the hard rock, and though it had some difficulty with low temperatures, it brought in the well at 3857 feet, under control. *Write for the free 80-page handbook "Diamond Drilling for Oil."*

Sullivan Machinery Company
88 East Adams Street, Chicago

crude methods of getting out the raw material at McMurray, paving with this material costs 20 cents per square yard less than asphalt paving. With equipment in the field and at the paving plant perfected and some labor-saving devices added it is expected that a further saving of 25 cents per square yard will be made, bringing the cost down to approximately 75 cents per square yard.

The next step in the tar sand development will be the commercial extraction of the crude oil which has good cracking qualities. A method now being perfected and tested in the field by J. O. Absher of Calgary, formerly of Montana, gives good promise of accomplishing this on a commercial scale.

In addition to the operations by the Department of Mines, McMurray Asphaltum & Oil, Ltd., has a plant at McMurray, which has shipped some asphaltum. Production of bituminous sands from this area in 1926 amounted to 528 tons valued at $2,112. In 1925 the shipments amounted to 1,148 tons valued at $4,594. For the first half of 1927, some 291 tons, valued at $1,164, were shipped.

In Saskatchewan

In Saskatchewan, the London-Ribstone Petroleum, LSD 14, Section 10-43-28w3, on the eastern end of the Ribstone-Blackfoot structure, is down 350 feet and setting and cementing 12½-inch casing to shut off top waters. It is planned after drilling through the cement to continue for between 800 to 900 feet, when the drillers will again resume coring. From field information and indications of the drilling so far, it is believed this test is at least 350 feet higher on the structure than the producers in the Wainwright Field further east. The company holds 14,000 acres in a solid block in Township 43-3w4. The acreage was reported on by Doctor Warren and Dr. J. A. Allan of the University of Alberta, and was also examined by the English geologist, Doctor Campbell-Hunter. The company is financed by Vancouver, B. C., and English capital. On the Alberta end of the structure, Ribstone Oils, LSD 1, Section 1-46-1w4, has cemented casing at 1,925 feet and will resume drilling as soon as the cement has set.

It is understood that interests represented by C. J. Yorath, general manager of Northwestern Utilities, Ltd., of Edmonton and the Canadian Western Natural Gas, Light, Heat & Power Co. of Calgary, are planning to develop a natural gas supply in Saskatchewan to be piped to the cities of Saskatoon, Regina and Moose Jaw. It is understood that a structure has been located by core drilling in western Saskatchewan within reach of the three cities and that drilling will be started this fall provided franchise arrangements are completed.

In Manitoba a test for water on the Robert Hall farm near Hartney has encountered a considerable flow of gas at shallow depth. The commercial gas possibilities of the adjacent district are being investigated.

In the Cypress Hills area of southeastern Alberta, Eagle Butte Oil Co., LSD 3, Section 31-7-4w4, is drilling. The Cypress Hills structure is a double dome, and was blanketed last spring by Toronto interests headed by Col. R. B. Harkness. W. G. Rowe is field manager for the company. The heavy duty outfit used for the Roth syndicate No. 2 test at Redcliffe, in the Medicine Hat Field, is being used for the Eagle Butte well, with a 115 horsepower engine equipped to run on either gas or gasoline. The camp is electrically lighted, and it is planned to continue drilling through the winter.

Ontario Fields

In the Ontario fields, the report that the provincial government has been testing the Mattagami Valley for oil structures is officially denied. Col. R. B. Harkness, natural gas commissioner, has returned from the Mattagami River Basin where the drilling carried on has been to determine the extent of the china clay deposits.

In Lambton County, Union Natural Gas Co.'s No. 18 Mackie farm, Dawn Township, is reported drilling at 1,100 feet. In the old Tilbury Field, Kent County, Union Natural Gas Co.'s No. 272 Shanks farm, Talbot Road, Romney Township, has finished a small gasser in the Tilbury sand. Union's No. 273, on the back of the Jackson farm, Talbot Road, Romney Township, has also finished with a fair production in the same horizon. The outfit is being moved in for No. 274 on the John Shanks farm, Lot 184, Talbot Road; and another outfit is being moved to the Radmor farm for No. 275.

SOUTHWEST WILDCATS

(Contineud from Page 51)

country is that No. 1 Cage brought in by the Mission Drilling Co. is making about a gallon of gasoline a day, showing a tendency of the gas to be wet and that much of an added incentive to wildcat around for oil.

Maverick County is still a disappointment with the Rycade sidetracking at 4,115 feet in its No. 1 Chittim, total depth of which was 5,640 feet, and with a fishing job on hand in No. 2 Sullivan at 5,132 feet.

Duval County

Schlessinger Oil Corp.'s No. 1 Moody, Survey 60, located 330 feet to north line and 1,650 feet to east line, pulled casing in two and is going over with another string, total depth 2,401 feet. National Oil Co.'s No. 1 Ball, Survey 16, located 450 feet to north line and 150 feet to east line, is building roads to location.

Jim Hogg County

Paizano Oil Syndicate's No. 1 Campbell, Las Vivoritas grant, is recementing at 1,204 feet. O. W. Killam's No. 1 Canales, A. Canales tract, Baluarto grant, is moving on. Holden and others' No. 3 Jones, Share 27, Block 136, located 330 feet to east line and 440 feet to north line, is standing at 2,548 feet. Hamilton and others' No. 1 Holbien, Block 44, located 158 feet to south line and 363 feet to west line, is preparing to resume at 2,080 feet.

Starr County

Woodruff and others' No. 1 Kelsey is location in Porcion 76. Harston and others' No. 1 H. Guerra, Survey 43, located 2,400 feet to south line and 2,000 feet to west line, is rigging up. Foltz and others' No. 1, Survey 301, located 150 feet to northwest lines and 2,400 feet to west line, is ready to spud in. Commonwealth Oil Co.'s No. 1 Garcia, Survey 538, located 2,722 feet to south and 2,102 feet to west line, is standing at 1,190 feet. Milham Corp.'s No. 2 Salinas, Porcion 111, is standing at 5,033 feet in blue shale.

Bexar County

Allen Burnam's No. 1 Ward, A. A. Gardiner Survey, 1,200 feet to east and 325 feet to south line, hit gas pocket at 318 feet. Humble Oil & Refining Co.'s No. 1 Gembler, A. Manchaca Survey, 1,360 feet to west and 1,730 feet to north line, is location.

Bee County

D. Hewitt's No. 1 G. A. Ray, G. A. Ray Survey, west central, is drilling at 2,100 feet; derrick timbers are being unloaded at Pettus for No. 2 Ray. Nishols & White's No. 1 Hicks, Block 19, NW cor., is standing at 1,408 feet. Red Ant Oil & Gas Co.'s No. 1 Perry & Chestnut, B. Q. Hadley Survey, 450 feet to east line and 1,600 feet to south line of farm, is drilling at 480 feet.

Blanco County

C. W. Bates is preparing to make location for test 8 miles east of Blanco City. Miller Creek Leasing Corp.'s No. 1 Glasscock, Survey 50, is location 150 feet to CEL.

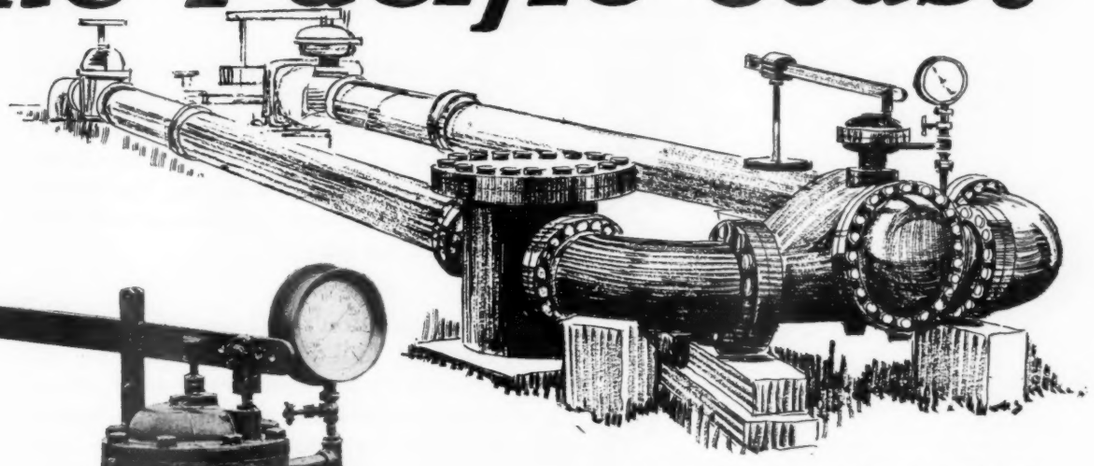
Caldwell County

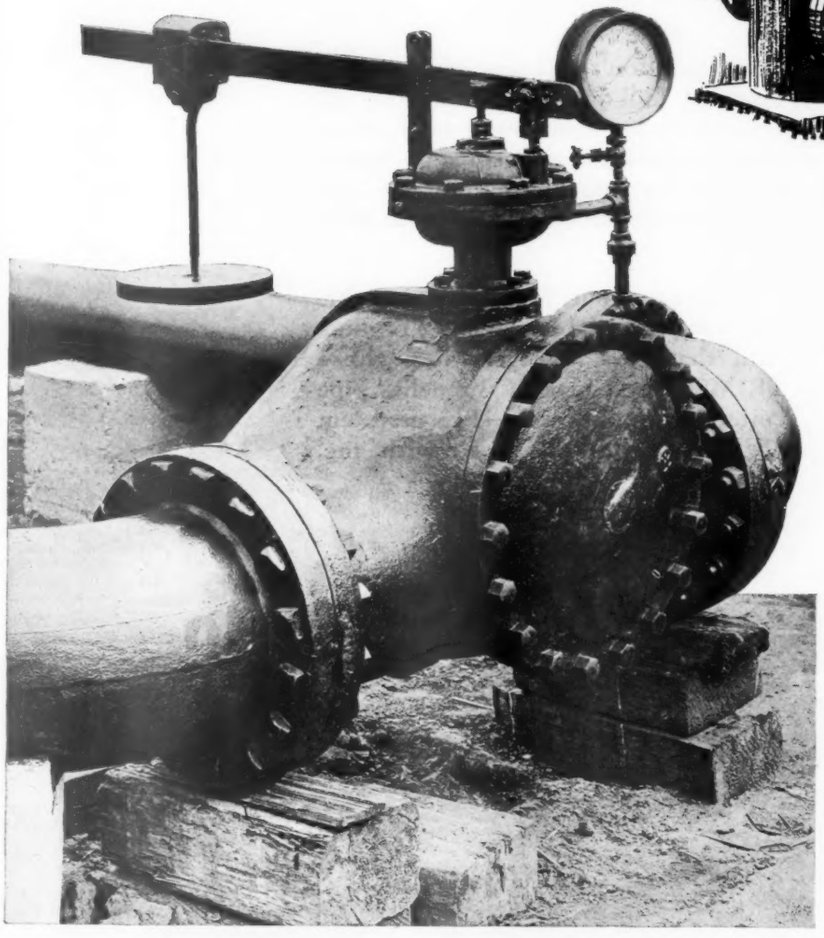
Calco Petroleum Co.'s No. 1 Thomas, 600 feet southeast of No. 1, is standing at 1,820 feet. Detex Oil Co.'s No. 1 Hardeman, 4 miles north of Luling, is at 2,987 feet. Ratcliffe's No. 1 J. L. New, James Hindes Survey, 150 feet to west line and 600 feet to south line, at 2,914 feet, 26 feet in Edwards lime, is washing and setting liner, and claims to have show of oil. Sutton & Smith's No. 1 Carter, G. Hindes Survey, 150 feet to CNL, is standing at 2,597 feet; No. 2 Carter is location 300 feet east of No. 1.

DeWitt County

Empire Southern Oil Co.'s No. 2 Smith,

EMCO Regulators on the Pacific Coast





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The Pipe:

Hey, TRIMO, how about giving me a rest? It's easy for me to fool these other pipe wrenches, but when a TRIMO grips me, I twist so fast that it makes me dizzy. As Little Red Riding Hood said, "What sharp teeth you have, grandma!" What's the reason?

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I've known about TRIMO replaceable jaws for years and I know they're good. And that goes for every tool these TRIMO people make. Wrenches, pipe cutters, and pipe vises—I've used 'em all and they're all O. K. with me.

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ROXBURY (BOSTON), MASS.

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Survey 3, is drilling at 3,000 feet. Williams & Gates' No. 1 Gohmert, G. W. Brooks League, 175 feet to north line and 300 feet to east line, is shut down at 760 feet.

Dimmitt County

Humble Oil & Refining Co.'s No. 1 City National Bank, Survey 654, located 700 feet to north line and 2,000 feet to east line, is at 3,800 feet.

Frio County

Lain & Brown's No. 1 Edwards, Hooper & Ward Survey, 920 feet to CNL, is moving out derrick timbers. Neilan's No. 2 Blackaller, James Gouley Survey, is location, skidding derrick over from No. 1.

Fayette County

Magnolia Petroleum Co.'s No. 1 Fordtran, J. R. Jones Survey, 200 feet to northeast lines and 1,050 feet to west line, is drilling at 3,920 feet.

Goliad County

Houston Oil Co.'s No. 1 Lott, G. Cortinas Survey, 2,000 feet to north line and 300 feet to west line, is testing at 2,902 feet; No. 4 Pettus, P. Trevino Survey, 1,200 feet southwest of No. 2, is rigging up. C. W. Simpson's No. 1 Ideus, W. H. Pendleton Survey, 156 feet to north and 540 feet to west line of lease, is drilling at 1,250 feet with four slight showings of gas.

Gonzales County

Dunning & Pierce's No. 1 Wilkerson, P. Ward Survey, 150 feet to CNL, is drilling; Bristol Oil & Gas Co.'s No. 2 Denman, A. Zumwalt Survey, is shut down at 807 feet. Bruner's No. 1 Vaughan, Kent Survey, 200 feet to west and 300 feet to south line, is standing at 1,406 feet. Gonza Petroleum Co.'s No. 1 Elder is standing at 1,636 feet; No. 2 Elder, Block 11, southwest of No. 1, is standing at 1,250 feet; No. 1 Sinclair, 4 miles northeast of No. 2 Elder, is standing at 1,200 feet. L. L. Jones' No. 1 Campbell, Moore & Bridges Survey, SW cor., is shut down at 100 feet. Martin Oil & Development Co.'s No. 1 Preston Pace League, near Cheapside, is bailing at 1,576 feet; The Texas Company's No. 2 Plowman, Byrd Lockhart Survey, is drilling; No. 3 Plowman, Byrd Lockhart Survey, is location 2,640 feet southeast of No. 1. L. P. Unkel's No. 1 Hampton, C. H. Jaeger Survey, 240 feet to southwest lines and 120 feet to southeast lines, is drilling at 600 feet, with 214 feet the producing depth of his other shallow wells.

Guadalupe County

F. A. Lain's No. 1 Weinert, W. K. Estell Survey, 150 feet to CNL, is shut down at 3,002 feet, expecting to deepen. H. H. Temple's No. 1 McAllister, Edward Kellett Survey, 450 feet to northeast lines and 1,420 feet to northwest lines, is shut down at 1,940 feet for titles.

Hays County

J. E. Rodgers' No. 1 Hohenburg, 2½ miles east of San Marcos, is drilling at 1,740 feet.

Jackson County

Houston Gulf Gas Co.'s No. 2 Druschel is drilling at 2,280 feet.

Karnes County

Maurer & Ellis' No. 1 Henke, located 600 feet to east line and 500 feet south of railroad, is drilling at 2,000 feet, 400 feet in sticky shale. Reynosa Oil Corp.'s No. 2 Butler, Block 43, located 1,000 feet south of No. 1, is working at 1,947 feet keeping water pumped off and gas is showing slightly.

Kinney County

Havelin Oil Co.'s No. 1 Weatherby, Section 21, Block 5, is standing at 4,365 feet. W. A. Stephens and others' No. 1 Jim Clamp, Survey 346, is standing at 1,070 feet.

Lavaca County

M. L. Benedum's No. 1 Russek, J. G. Reynolds Survey, Block 38, at 1,060 feet to west and 210 feet to south line, at 3,275 feet cored and is shut down waiting on casing.

Live Oak County

Delta Oil Co., Inc.'s, No. 1 McNeil, Jane Curry Survey, 4,000 feet to northeast corner and 3,000 feet to northwest lines, is shut down at 1,010 feet. F. A. Lain is making location for test 3 miles north of the Cartwright gas field. Houston Oil Co.'s No. 19 Cartwright, W. J. Cannon Survey, 1,500 feet northeast of No. 17, is rigged up; No. 20 Cartwright, M. Trudo Survey, is location in SE cor.; No. 21 Cartwright, J. M. Colchado Survey, is location 2,900 feet northeast of No. 18. Ed Leach's No. 1 McWhorter, 175 feet south of Lagarto Creek and 175 feet west of Nueces River, has derrick up and machinery moving in. R. P. Lightfoot's No. 1 Thomas, Survey 963, Block 19, west central, is standing at 1,316 feet. Roxana Petroleum Corp.'s No. 1 West is location in the south pasture of the West ranch. Simmons Oil Co.'s No. 4 Sartain is standing at 2,303 feet; No. 2 Reagan is location 1,320 feet east of No. 1; No. 1 Griss is location 200 feet to north line and 1,080 feet to east line. J. W. Walton's No. 1 Roberts, west of Three Rivers, is pulling casing at 1,860 feet.

Medina County

California-Medina's No. 1 Rothe, Survey 1,012, is shut down at 3,270 feet. Johnson's No. 1 Mumme, Survey 100, is standing at 1,100 feet. Medina Oil Co.'s No. 1 Taylor, Survey 135, is drilling at 1,230 feet. R. P. O'Brien's No. 1 Nixon, Survey 531, is standing at 1,007 feet. Cecil Switzer's No. 1 Zerr, Survey 459, west central, is resuming drilling at 3,485 feet. J. A. Swayze's No. 1 Oeffingers, Survey 129, Block 22, is shut down at 300 feet.

Maverick County

Johnstone & Hout's No. 1 Whipff is standing at 1,200 feet. Ryan Consolidated Petroleum Co.'s No. 1 Indio, Survey 14, center, is fishing at 2,300 feet. Rycade Oil Corp.'s No. 1 Chittim, Section 129, Block 7, total depth 5,640 feet, is sidetracking at 4,115 feet; No. 2 Chittim, Section 158, Block 7, is drilling at 700 feet; No. 2 Sullivan is fishing at 5,132 feet.

McMullen County

Houston Gulf Gas Co.'s No. 2 Fisher, 600 feet west of Frio River and 1,700 feet south of No. 1, is drilling at 200 feet. Nelson & Wood's No. 1 Shiner, Survey 48, Block 74, is standing at 1,700 feet. George Pickett's No. 1 Jacob Survey 7, located 660 feet to CNL, is standing at 3,030 feet, and will deepen. Sun Oil Co. is continuing to diamond core drill on the Washburn ranch.

Nueces County

Sexat Oil Co.'s No. 4 Dunn, 300 feet south of Bay, has set casing at 2,300 feet; No. 2 Meaney, 730 feet to east line and 218 feet to south line of tract, is coring at 3,500 feet; No. 2 Weil is shut down at 2,360 feet.

San Patricio County

Houston Oil Co.'s No. 1 Ragsdale, J. N. Seguin Survey, is location 300 feet to SE cor.; No. 1 Baldwin, Roos Survey, Block 5, is location 250 feet to west line and 200 feet to south; No. 2 Humble, Roos Survey, Block 7, is location 167 feet to SE cor.; No. 3 Humble, same survey and block, is location 200 feet to north line and 250 feet to east line. Huber & Crawford's No. 1 Mathis, Delgavo Survey, Block 17, is shut down at 2,516 feet. Mission Drilling Co.'s No. 1 Harwood is drilling at 1,690 feet; No. 2 Cage is drilling at 2,200 feet. National Oil Co.'s No. 1 Sullivan, J. C. McMullen Survey, 500 feet to SW cor., is setting 10-inch surface casing at 280 feet. George B. Pickett's No. 1 J. E. Garrett, Faft Survey, Block 23, located 1,500 feet to west line and 1,000 feet to south line, shut down at 360 feet on account of titles. Sexat Oil Co.'s No. 9 Rachal is drilling at 1,450 feet; No. 12 Rachal, 1,322 feet to north line and 150 feet to west line, is rigged up; No. 7 Dunn, C. P. Rachal Survey, is location 150 feet to north and 811 feet to east line. John Sigmund's No. 9 Robinson, 350 feet southeast of No. 7, is rigging up. J. E. Walsh's No. 1 Clara M. Oven, George Paul subdivision, Block 45, located 150 feet to SW cor., is drilling at 2,400 feet.

Victoria County

Valley Oil Co.'s No. 1 Stoever, Survey 9, located 500 feet to SE cor., is drilling in gumbo. R. M. Talbott's No. 1 Reeves,

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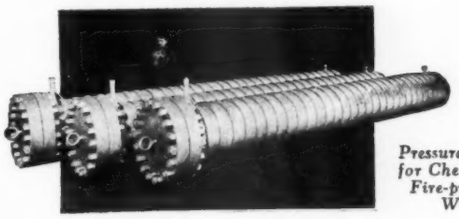

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2,000 feet to west line of Reeves estate, is shut down at 750 feet.

Val Verde County

Crusoe Williams' No. 1 Holman, Section 5, is shut down at 2,940 feet for casing. Douglas Oil Co.'s No. 1 Sellers, Section 82, is drilling at 3,140 feet in lime. East Del Rio Oil Co.'s No. 1 Russell, Section 183, is straightreaming at 3,190 feet. Independent Operators' No. 1 Whitehead, Section 30, Block 3, is shut down at 3,925 feet. Magnolia Petroleum Co.'s No. 1 Whitehead, Survey 81, is drilling in black shale and sandy lime at 3,975 feet. O. O. Owens and others' No. 1 Mills, Section 128, Block 1, standing at 2,820 feet, is expected to start drilling within a few days as soon as casing arrives.

Wilson County

Thomas and others' No. 1 Aug. Haese, Survey 124, located 300 feet to NE cor., is testing at 2,357 feet in Edwards.

Zavala County

J. G. Pundt's No. 1 West, Fuentes Survey, NW cor., is waiting on casing at 936 feet. B. F. Thompson's No. 1 West, northern part of county, is standing at 228 feet.

CALIFORNIA FIELDS

(Continued from Page 56)

George F. Getty's field department closed an exceedingly busy week by recompleting two former upper sand producers and, with five additional projects within 200 feet of completion in the deep horizon, the next 14 days will also keep everyone on the jump. Getty's two wells were Nos. 2 and 4 on the Alamitos property, both recompletions, the former being deepened to 5,477 feet and the latter to 5,548 feet. No. 2, flowing through a seven-eighths-inch bean under a pressure of 600 pounds, registered an initial of 1,275 bbls., while No. 4 showed 2,080 bbls. through a 1-inch bean, the pressure in this case being 750 pounds.

The Superior broke about 50-50 in its operations during the week and although the company put two wells on production only one came up to expectations. This was No. 1 Horowitz, which came in flowing 1,500 bbls. daily after being deepened to the Wahl zone at 5,491 feet. No. 2 on fee lease No. 1 was a considerably smaller well as it registered an initial of only 475 bbls. upon recompletion after being redrilled and deepened from 4,870 feet to 5,335 feet. The bottom of this hole is at 5,411 feet but the lower 76 feet was plugged off when core samples revealed the existence of a gray sand. The Union Petroleum & Drilling Co. finished one of the few new wells listed this week by bringing in No. 1 Sneedem flowing 1,380 bbls. of clean 28.2 gravity oil from 5,422 feet. The Ring Petroleum also brought in a new well and incidentally added 1,360 bbls. per day to the field's production. No. 1 Alamitos, the well in question, passed up the Selover sand and drilled direct to the deep pay. The Marland only finished one well during the week but has five others on the Selover property within a few hundred feet of completion and consequently this company will appear quite prominentaly in completion lists during the next two or three weeks. The new well just finished was No. 19 Bixby which registered 365 bbls. initially on a compressor at 4,867 feet. The small production shown by this well is due no doubt to the fact that a satisfactory water shut off was not effected and with present production cutting about 20 per cent it is almost certain some corrective measures will be undertaken.

The smallest well finished during the current week was the Italo-American Oil Co.'s No. 20 Alamitos which is flowing 225 bbls. daily from 5,305 feet. This well, like the Marland's No. 19 Bixby, is cutting about 20 per cent water and will probably be worked over in the near future. The Standard Oil Co.'s No. 7 San Gabriel, an upper or Selover zone completion, was slightly better than the Italo-American's completion as it is making 250 bbls. daily, although in this case a natural flow was not secured and it was found necessary to put the well on the beam. After working for several weeks on No. 14 Alamitos the Standard has decided to abandon the hole as it was practically junked by the terrific gas blowout which occurred a month or two ago. As a result the rig is being skidded to a new location and the replacement will be known as No. 14-A San Gabriel. The South Basin Oil Co.'s No. 1 Copeland, a recompletion in the lower sand after being redrilled and deepened from 4,872 feet to 5,488 feet, came in flowing 1,225 bbls. of clean 28.6 gravity oil daily but settled two days later to 850 bbls., the pressure, 675 pounds, remaining fairly consistent during the transitory period. Fred Aitken finished his No. 1 Alamitos late yesterday afternoon and based on a 16-hour flow test it is making approximately 900 bbls. daily from 5,503 feet, the output cutting considerably less than 1 per cent.

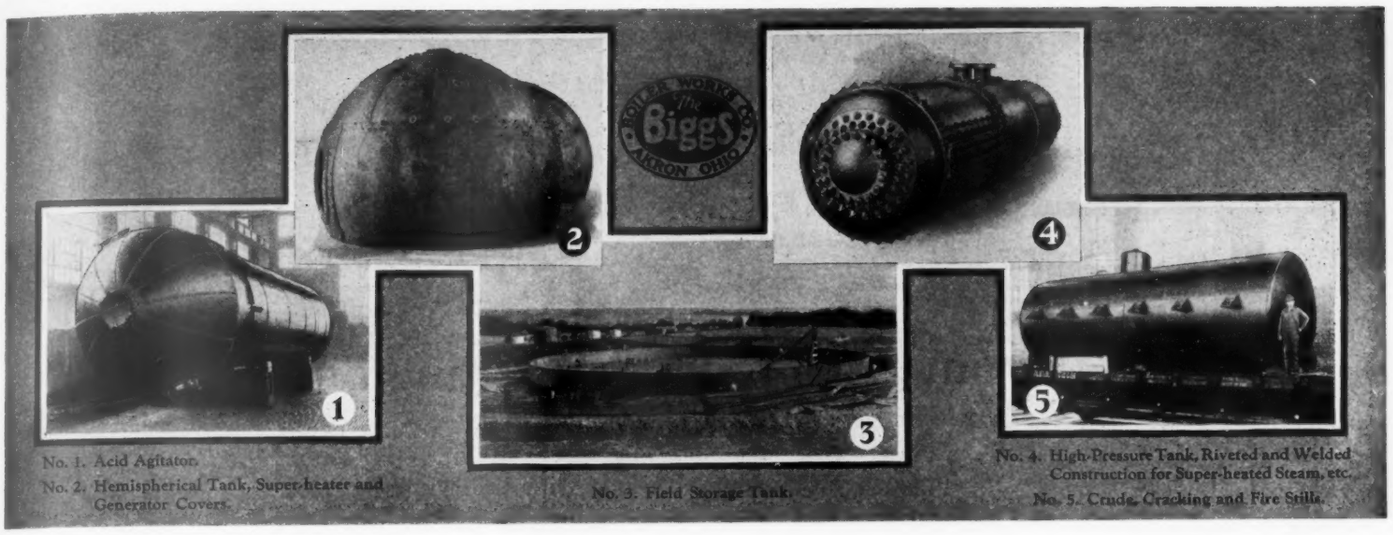
Huntington Beach

During the past seven-day period the Standard finished two new wells on its Pacific Electric lease which parallels the ocean front in the town lot area at Huntington Beach, but, in contrast to previous completions on this property, both were relatively small producers. No. 11 showed 162 bbls. of 21.4 gravity oil initially from 4,369 feet, while No. 12, the other new well finished, started off doing 250 bbls. daily from 4,345 feet. The Standard has three other wells under way on this lease in addition to two others on the Bolsa Chica lease in the older section of the field. Davis & Quinn's No. 1 Huntington in the town lot section was put on the beam at 3,824 feet after being plugged back from 3,840 feet and it showed an initial pumping of 175 bbls., the oil testing 21.3 degrees and showing a cut of 2 per cent. E. J. Miley has taken over the Calnan Petroleum Co.'s No. 1 Huntington, northeast of the old Huntington Beach Field, and this well, which is reported to have cored 25 feet of sand, will undoubtedly be watched with considerable interest as most operators have been of the opinion that it is off the Huntington Beach structure. Its importance is evidenced by the fact that several hundred acres have been leased on the assumption that there may be another productive area northeast of the old field. Jim O'Donnell's abandonment of his No. 1 Gothard, west of this hole and northwest of the California Petroleum's Buck property, at 5,150 feet has not discouraged leasing to any extent whatever. The Calnan well, taken over by the Miley organization, is less than a mile from the old Talbert holes drilled over two years ago and is located in an area where there should be some oil. No lease maps are available covering recent accumulations but it is reliably reported that the Miley, Shell, Marland and Jergins interests have all acquired protective acreage, some of the leases calling for bonuses of $500 per acre, most of which, however, is payable in oil.

Long Beach

The past week saw the completion of two large deep sand producers in the Long Beach Field and both incidentally came up to expectations. The largest was No. 13 Alamitos of the Shell, which was returned to production flowing 2,250 bbls. of clean 26.1 gravity oil daily after being redrilled and deepened to 5,655 feet. The California Eastern's No. 11 Apex, acquired in the Marine merger, came in flowing 1,782 bbls. initially after being redrilled and deepened to 5,230 feet. This well was originally finished as a 550-bbl. flowing well at 3,960 feet several years ago but had fallen off to almost nothing during the past year. The California Eastern also recompleted another project at Long Beach but in this case only normal production was secured. The well was No. 1 Hughes, which was put on the beam at 4,686 feet from which depth it came in pumping 195 bbls. of 28.1 gravity oil daily. There have been several deep flowing wells finished in the Long Beach Field during the current year to date and, judging by the amount of work under way at present, there should be 10 or 12 more brought in during the next three or four months.

The deep wells finished up to the present are not the result of a general deepening campaign but are due more or less



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to a rather spasmodic condition, that is, there has been no determined effort made to capitalize on deep sand possibilities. As a matter of fact, the Shell alone could probably increase its daily production in excess of 25,000 bbls. per day by broadening its scope of work but as a rule, operators are content to refrain from this deep drilling until a future date. The California Petroleum, Richfield, Pan American and California Eastern could also increase present production very appreciably by additional deep drilling. These companies have all added one or more deep flowing wells during 1927 but, as has been stated, no general compaign has been undertaken because of the heavy overproduction. The Richfield is running five strings of tools in this field, with the deep sand ostensibly as the objective. The California Petroleum is punching down four wells to the deep sand, while the California Eastern, Graham & Loftus, Rio Grande and a few other operators are working on single locations.

Inglewood

The Associated has inaugurated a general reconditioning campaign in the Inglewood Field and it will work over a large number of producing wells which are not producing according to schedule. This work will no doubt stimulate the company's production, which, in common with other operators, has been consistently declining, due in a large extent to the fact that the perforations have become clogged up. The Standard has been working on a similar program for several months with good success. In the Santa Fe Springs Field the Associated plugged back No. 4 Clark 66 feet and successfully overcome a water condition which has prevented this well from producing clean oil. That the plug has proved effective is evidenced by the fact that the output, 275 bbls. daily, is only cutting approximately 3 per cent. With drilling operations in the Dominguez Field reduced to an absolute minimum, the only work of any consequence in this area is the deep test being drilled by the Union Oil Co. on the Callender lease. This hole, No. 17 Callender, was reported down 5,420 feet several days ago.

The Continental Oil Co., which extended the proven limits of the Richfield district late last year and is therefore responsible for most of the present drilling operations in this field, spudded in a new well on the Pyne lease early in the week and has made over 1,000 feet of hole. The Continental interests shortly taking over the property of the Merchants Petroleum, redrilled and deepened No. 1 Pyne to a lower sand and brought it back into production flowing 1,000 bbls. per day. Several additional wells have subsequently been deepened on this lease and over 275,000 bbls. of crude have been recovered during the year to date, No. 1 alone being credited with a total of something like 160,000 bbls. The company's last completion in this district was No. 3 Pyne, brought in last week flowing 750 bbls. of clean 24.1 gravity oil daily. Operations at East Coyote, while they are not on as broad a scale as the work at Richfield, should result in the completion of several new producers in the near future. The Chicksan, with four wells under way, and the Herndon Petroleum Co. with two, are both expected to secure commercial production.

Ventura

There were no new wells finished in the Ventura Avenue Field, although several potential producers are nearing completion and should be tanking oil within a short time. The Petroleum Securities has three new wells on the Willett and Orton leases in the southern part of the field which have been showing up quite promising and at least one of them should be brought in within the next 10 days. In the extreme northern part of the field G. J. Magenheimer's No. 1 Hartman has taken on a rather doubtful outlook and unless something is picked up very shortly this hole looks like a duster. The bit is at present going ahead at 7,205 feet and the well only has an outside chance of getting production. A test made several weeks ago at 6,400 feet failed to result in commercial production and although it had all the earmarks of a good well at that time it just simply didn't have any kick. The Associated and Bolsa Chica erected rigs for offsets where the first test was made but upon the failure of Magenheimer to get production drilling was held in abeyance. The well, No. 1 Hartman, incidentally is the deepest hole drilled in the Ventura Avenue Field, the only other test which went below the 7,000-foot level being the Milham Exploration Co.'s No. 1 Sexton, off structure east of the field. The General Petroleum will conclude its drilling program in the Ventura Avenue Field in the very near future as the company has only four or five additional locations available. The Associated and Shell, on the other hand, have considerable undrilled acreage and will therefore continue normal development work. During the past week the former spudded in No. 102 Lloyd, while the latter started actual drilling on No. 25 Gosnell.

Kern River

George F. Getty finished another one of his periodical completions on the Kern front several days ago by bringing in No. 18 Lehnhardt as a 120-bbl. pumper from 2,177 feet. Getty incidentally has completed 51 producers in this area up to the present and should complete lease drilling requirements on the Tegeler and Lehnhardt properties within two or three months. With drilling requirements practically completed on these two leases, Getty's geologists have been looking around for new production and a rig is in course of construction on the Grady lease in Section 26-28-27. The Associated has just concluded drilling on its No. 1 in Section 23-28-27 and the outlook is good for commercial production. The Chanslor-Canfield Midway Oil Co. should olso list a new producer shortly as No. 8 in the same section picked up the top of the sand at 2,018 feet and pipe has already been run in. The Standard recently inaugurated a rather intensive drilling campaign on the Kern front covering Sections 15, 27 and 34 in Township 28, Range 27.

Drilling operations in the Midway-Sunset area have dwindled down to almost nothing during the past several months and consequently completions have been few and far between. The only development of any importance in this section was the completion of the North American Consolidated's No. 12 in Section 32-31-23, which resulted in a 160-bbl. pumper from 4,217 feet.

Round Mountain

The Round Mountain Field, approximately 15 miles northeast of Bakersfield in Kern County, has only experienced a limited amount of development work since being opened up by the Elbe Oil Co. several months ago due to the low grade of oil produced and absence of pipe line facilities. The Elbe interests, however, contemplate the drilling of four new wells in the very near future, all of which will have the present producing horizon as their objective. No. 6, a deep test in Section 20-28-29, has not yet found anything of importance below the Elbe sand and although there is still a chance of finding another zone, as the formation at 2,605 feet is a hard sandy brown shale, the outlook is far from encouraging. The L. & D. Producing Co. has just filed an abandonment notice on its No. 1 in Section 19-28-29 as granite was encountered at 2,523 feet. This well is only a little more than a mile away from the Elbe's No. 6 and consequently there does not appear to be very much hope of getting another sand. Two new wells are scheduled to get under way in this area, one by the Associated in Section 34 and the other by F. K. Grimes in Section 14. The Goldfield Consolidated Mines Exploration Co. recently leased 640 acres a little over 4 miles south of the Round Mountain Field, the deal involving a cash bonus of $12,800 and the payment of a one-eighth royalty on any production developed. This acquisition is more or less in the nature of protection coverage although the company may later drill a test as it has a drilling time limit of five years.

Goleta

The Miley Exploration Co. made a production test of its No. 9 in the Goleta Field early in the week but it failed to result in commercial production as the best it would do was 50 bbls. of fluid cutting in excess of 60 per cent from a depth of 1,478 feet. This field has proven a bust from a production standpoint because of its failure to maintain a stable output. No one ever anticipated large production from these shallow wells but it was generally believed that production will be relatively stable with wells having a settled production of at least 50 bbls. each. The action of the district has had a very detrimental effect on wildcat drilling in the entire area and as a result other prospectors have temporarily given up their attempt to open up another field similar to Goleta. Clarence Berry has listed both his No. 1 Pomatto and Cavaletto for abandonment, while the California Eastern has indicated its intention of abandoning No. 1 Doty, a short distance east. The latter company's project looked like an almost sure shot at one time but failed to deliver the goods. The Barnsdall's No. 1 Edwards also looks rather doubtful because of water trouble although some additional work will be undertaken before an abandonment is considered.

Northern California Wildcats

The Seacliff area west of the Ventura Avenue Field in Ventura County is again in the limelight as a possible new field and although an actual production test has not yet been made the Pan American seems almost certain of securing commercial production. This company's No. 1 State, which is drilling just inside of the tideline along the ocean front, has actually cored over 50 feet of rich oil sand at 2,851 feet and an early test is contemplated. The showings found in this well were stratigraphically higher than similar sands found by the Chanslor-Canfield Midway Oil Co. on the Hobson ranch and tend to indicate that the apex of the structure may be out in the Pacific Ocean. The Pan American took this lease over from the Chanslor-Canfield Midway Oil Co. several weeks ago and immediately started work. Acreage in this section is held in fairly large blocks and consequently drilling operations will be conducted in a normal manner if a new field is opened up, although some offsetting will, of course, be necessary. The Chanslor-Canfield Midway Oil Co. is still working on its two test wells on the Hobson property and this company may also develop commercial production as both holes have been in the oil sand for some time. It was this company which really indicated the possibilities of Seacliff and it is to be hoped its pioneer exploratory work will be rewarded. This company has spent considerable time and effort and it was thought at one time an actual production test would be made but mechanical trouble thwarted plans at the last moment.

The Union Avenue, or Casa Loma area near Bakersfield in Kern County, is still an unknown factor although leasing is still quite active. The acquisition of potential oil land, however, is not limited to any particular locality but is more or less general in scope. Operators are playing in all directions from the Pacific Eastern's Union Avenue test and the several additional holes already under way at Edison, Greenfield, Fruitvale and Mon Bluff seem to be only a starter. The Pacific Eastern will begin drilling another hole 5 miles west of its present test shortly and the possibility of success is quite favorable. The California Petroleum and Petroleum Securities have both been quite active in southern Kern County for several weeks, both having acquired community leases ranging from 15 to 75 lots. George F. Getty and the Barnsdall have also acquired protective acreage. The Standard recently leased an additional 800 acres in the Delano Jasmine area and while no work is contemplated for the present, drilling will no doubt get under way soon if any of the tests in this locality show any favorable symptoms. The Midway Northern Oil Co. has tied up something like 3,000 acres at Edison, approximately 12 miles east of Bakersfield and because of the extent of this holding an early test is contemplated.

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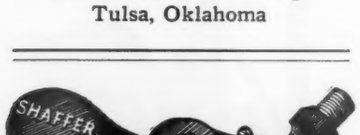

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SHAFFER
The Standard Boiler Gauge Cock

WILDCAT OPERATIONS IN PANHANDLE

(Continued from Page 40)

DONLEY COUNTY

A. T. Drlg. Co.'s No. 1 F. E. Harington, Sec. 19, Blk. 3-C ..... 1,200 ft. water, 3,115-23 ft; show gas, 3,140-60 ft; dry granite wash, 3,260-93 ft; S.D., 3,498 ft.

DICKENS COUNTY

Bowser Mickels et al's No. 1 Pitchford ranch, Sec. 1, Blk. 1, Sam Lazarus Sur. ..... S.D., 3,355 ft; cor. depth; T.A.

FLOYD COUNTY

Expltn. Co.'s No. 1 S. H. Boone, C. C. H. Johnson Sur. ..... Spudded and S.D.
Expltn. Co.'s No. 1 Land & Cattle Co. ..... S.D., 780 ft. for orders.

GRAY COUNTY

Amogray Oil Co.'s No. 1 A. Chapman, SW NW SW, Sec. 9, Blk. 26, H. & G. N. Sur. ..... 2,000,000 ft. gas, 2,150-55 ft; 15,000,000 ft. gas, 2,240 ft; drlg., 2,460 ft.

Atlantic O. P. Co.'s No. 1 Combs & Worley, NW cor. NE Sec. 39, Blk. 3 ..... T.D., 3,085 ft; shot 560 qts., 2,947-3,052 ft; sprayed 30 bbls. 24 hrs. and went dead; T.D., 3,165 ft; plugged back to 3,115 ft.

Archer, Blake et al's No. 1 Turneau, Sec. 111, Blk. 2-B. . Spudded and S.D; temp. abd.
Amos et al's No. 1 Crews, NW cor. Sec. 9, Blk. 25 ..... Shot with 300 qts., 2,720-2,815 ft; T.D., 3,005 ft., bridged and spraying 10 bbls. per day; installing pump.

Bay Shore Oil Co.'s No. 1 C. W. Bradford, Sec. 143, Blk. 2-B ..... Killed gas, fish. for bit, 2,668 ft.
British American Oil Co.'s No. 1 J. M. Patton, Sec. 61, Blk. B-2 ..... Rigged and S.D.; temp. abd.
Camel Oil Co.'s No. 1 Harrah, Sec. 163, Blk. 3, I. & G. N. Sur. ..... Drlg., 2,290 ft.
Cole O. & G. Co.'s (was Magdalene Oil Co.'s) No. 1 J. E. Williams, Sec. 17 Blk. 1 ..... S.D., 3,860 ft.
Danciger et al's No. 1 Jackson, NW cor. Sec. 88, Blk. B-2. Set 8-in., 2,477 ft; show gas, 2,530-2,625 ft; 10,000,000 ft. gas, 2,682-2,800 ft; drlg., 2,925 ft.

Delaney et al's No. 1 Jackson NW cor. E ½ SW, Sec. 88, Blk. B-2 ..... 8,000,000 ft. gas, 2,515-80 ft; show oil, 2,890-2,900 ft. and 2,938-44 ft; best pay, 2,982-85 ft; granite wash flowed 1,500 bbls. first 8 hrs.

Donley Gray Oil Co.'s No. 1 J. W. Gordon, Sec. 79, Blk. 3 ..... Water, 3,380 ft. and 3,430 ft; show oil; drlg., 3,460 ft.

Jack Doyle's No. 1 D. W. Osborne, SE cor. Sec. 109, Blk. 3 ..... Rig.
Edwards et al's No. 1 E. J. Case, NE cor. Sec. 182, Blk. B-2, H. & G. N. Sur. ..... Cmt. 10-in., 2,370 ft.
Empire G. & F. Co.'s No. 1 Sarah George, Sec. 151, Blk. 3, I. & G. N. Sur. ..... Drlg., 2,110 ft.
Empire G. & F. Co.'s No. 1 I. B. Hughey ..... Swabbing 35 bbls; may install gas lift and not deepen.
Gibson Oil Co.'s No. 1 Bowers, Sec. 92, Blk. B-2 ..... 2,500,000 ft. gas, 2,560-2,675 ft; 30,000,000 ft. gas, 2,780 ft; 1,200 ft. oil, granite wash, 2,965-3,007 ft; bldg. storage.

Gladis Gray's No. 1 Colebank-Morse (was Foster et al's No. 1 G. Cutebank), SW cor. NE Sec. 65, Blk. 25 .... 2,905 ft., T.D; plugged back to 2,803 ft; shot 160 qts. 2,420-2,510 ft; 1,200 ft. oil in hole; bailed dry; shot 600 qts., 2,479-2,525 ft; C.O; swabbing 25 bbls. daily.

Gray County Pet. Co.'s No. 1 Herndon, Sec. 147, Blk 3 .... Hole full salt water, 3,420 ft; S. D., 3,630 ft; no show oil or gas.
Lefors Pet. Co.'s No. 1 Leach, Lefors Townsite ..... 10,000,000 ft. gas, 2,290-2,300 ft; lime; drlg. ahead.
H. C. McCauley et al's No. 1 J. Morse ..... R'g.
Magnolia Pet. Co.'s No. 1 H. Heltholt ..... C.O, 3,288 ft.
Neudigate et al's No. 1 A. Chapman, NE cor. E half SE Sec. 52, Blk. 25 ..... 500,000 ft. gas, 2,760-65 ft; rainbow of oil, 2,820-25 ft; salt water; granite wash, 2,827-28 ft; S.D., 2,835 ft.

Operators Oil Co.'s No. 1 Jackson ..... Rig.
Operators Oil Co.'s No. 1 Bowers, NE cor., Sec. 35, Blk. 3, I. & G. N. Sur. ..... S.D. to cement 6-in., 2,867 ft; show oil.
Pampa Oil Co.'s No. 1 W. R. Campbell, Sec. 90, Blk. 3 . . 700 ft. water, 3,430 ft; S.D.
Pampa Pet Co.'s No. 1 Mary Leopold, Sec. 141, Blk. 3 . . Water, 3,230-60 ft, slight oil show in granite wash, 3,572-75 ft; S. D., 3,700 ft; will abandon.
Riley & Heck's No. 1 Mrs. Hopkins, Sec. 66, Blk. 2-B . . Flow and swabbed 20 bbls. for week from gran. wash, 3,000-10 ft; T.D., 3,303 ft; S.L.M; may deepen.

Rensoul Pet. Co.'s (was Salisbury & Reynolds') No. 1 M. Huselby, C SE NE NE Sec. 55, Blk. 25, H. & G. N. Sur. ..... Flow, 40 bbls. daily from granite wash topped, 2,407 ft; drlg. granite wash, 2,845-53 ft. with small increase; shot with 400 qts., 2,695-2,780 ft. and 150 qts. at 2,560-2,620 ft; C.O; will shoot again; T.D., 2,960 ft.

Staggers Oil Co.'s (was Ruby Oil Co.'s) No. 1 B. F. Tally. Rigging up, 635 ft. (was temp. abd. early in April.)

Navillus Oil Co.'s (was Sullivan et al's) No. 1 fee, NW cor. E ½ SW, Sec. 1, Blk. 1, A. C. H. & B. Sur. ..... Drlg., 1,990 ft.
J. Williams et al's No. 1 C. W. Bradford, Sec. 123, Blk. B-2 ..... Rig; temp. abd.

HALE COUNTY

Bailey & Young's No. 1 Thomas ..... New loc.; spudded and S.D.
Donnell Pet. Co.'s No. 2 Mullican, NW cor. Sec. 66, Blk. A-3, I. & S. B. Sur. ..... Top pay in sandy shale, 405 ft; ½ baller oil and 3 bailers water per day; S.D., 525 ft.

Donnell Pet. Co.'s No. 1 Mullican, C Sec. 21, Blk. B, R. M. Thompson Sur. ..... 200 ft. fluid in hole from 407-14 ft; S.D.

Exploration Co.'s No. 1 Crawford, cen. NE, Sec. 17, Blk. C-3, T. T. R. R. Sur. ..... Spud and S. D.
Exploration Co.'s No. 1 fee, C SE half Sec. 19, Blk. S-4, D. & S. E. Sur. ..... Rig; T.A.
Exploration Co.'s No. 1 Goodman ..... Spudded and S.D.
A. S. Mimm's No. 1 W. A. Ritcher, 700 ft. from east line and 1,200 ft. from south line, Sec. 17, Blk. X, John Glynn Sur. ..... Drlg., 750 ft.
Gouldy & Stone's No. 1 Kitteral ..... New location.

HALL COUNTY

Seifert et al's No. 1 Owens, C NE Sec. 179, Blk. S-5, Dennison & Pacific Sur. ..... Spudded and S.D.

HANSFORD COUNTY

Oklavania et al's No. 1 Coots, Sec. 13, Blk. 45, H. & T. C. Sur. ..... S.D., 560 ft.

HOCKLEY COUNTY

World Oil Co.'s No. 1 Ellwood ..... S.D., 400 ft.

HARTLEY COUNTY

Deep Rock Oil Co.'s No. 1 Lymann & Balfour, Sec. 9 Blk. 2 ..... Show gas and rainbow of oil, 2,560 ft; top lime, 2,810 ft; 24,000,000 ft. gas, 3,100-3,280 ft; show oil, 3,643-50 ft; 3,653-75 ft. 150 ft. salt water; set 6-in. 3,642 ft; S.D., 4,033 ft.

Eslick et al's No. 1 J. R. Irving, Sec. 13, Blk. 13 ..... Topped granite wash, 3,108 ft; show oil, 3,226 ft; drlg., 3,775 ft.
J. E. McKanna's No. 1 Frances Farwell, Sec. 30, Blk. 22. . C.O., 3,290 ft.
J. E. McKanna's No. 1 J. M. Shelton est., Sec. 29, Blk. 202 ..... S.D., 3,585 ft.

HEMPHILL COUNTY

Hoover et al's No. 1 Schaller est., Sec. 4 ..... Spudded and S.D.
Hoover et al's No. 1 fee, J. S. Hood Sur. ..... S.D., 4,760 ft.

TESTING MACHINES FOR TESTING TORSIONAL STRESS IN STEEL OR WROUGHT IRON TUBING

AND OVER 1000 OTHER MACHINES AND APPLIANCES TO MEET THE COUNTLESS NEEDS OF THE ENTIRE PHYSICAL TESTING FIELD

RIEHLE BROS. TESTING MACHINE CO.
1424 North 9th Street
PHILADELPHIA, PA.

HUTCHINSON COUNTY

Anderson & Pritchard's No. 2 William Yake, SW cor. NW, Sec. 1, Blk. J, H. & G. N. Survey, half mile W of No .1 ..... Topped lime, 2,025 ft; set 8-in. at 2,030 ft; show gas, 2,495 ft; 10 bbls. oil and 50 bbls. water, 2,778-2,825 ft; salt water, 2,815-25 ft; S.D., 2,850 ft.

R. G. Barnum et al's No. 1 Garland Sanford, Sec. 78, Blk. 46 ..... Rig.

Beam et al's No. 1 Cockrell, Sec. 8, Blk. 23 ..... S.D., 405 ft. for orders.

Big Coach Oil Co.'s No. 1 Dunnaway, Sec. 5, Blk. Y ..... S.D., 750 ft.

Conklin et al's No. 1 Johnson, Sec. 1, Blk. X03, H. & O. B. Sur. ..... S. D., 600 ft. for 12-in.

Great Plains Oil Co.'s No. 1 Bivins, Sec. 13, Blk. Y-2, T. T. R. R. Sur. ..... 60,000,000 ft. gas, 2,540-60 ft; fish., 3,190 ft.

Golden Eagle Oil Corp.'s No. 1 J. Q. Bost, Sec. 6, Blk. Y-2 ..... Spudded and S.D.

McMan O. & G. Co.'s No. 1 Albert Yake ..... Set 8-in., 1,900 ft; fish.

Panfield Oil Co.'s No. 1 Luginbyhl Bros., Sec. 50, Blk M-23 ..... S.D., 1,200 ft.

Phillips Pet. Co.'s No. 12 Elva-Whittenburg, E. Tomlinson Sur ..... Set 5-in., 4,323 ft; S.D. for orders, 4,445 ft.

Prairie O. & G. Co. and Vacuum Oil Co.'s No. 1 Cal Merchant ..... Drowning out 75,000,000 ft. gas, 2,252-2,740 ft; fish., 2,550 ft.

Skyrocket Oil Co.'s No. 1 Mrs. R. A. Jameson ..... S.D., 2,519 ft.

Sweeney et al's No. 1 Johnson, Sec. 38, Blk. Y ..... Shut down, 1,730 ft.

The Texas Company's No. 1 Ellis Cockrell, Sec. 1, Blk. Y ..... Drlg., 3,725 ft.

Vitek Oil Co.'s No. 1 W. F. Allen, Jose Rodriguez Sur. ... S.D., 180 ft.

KING COUNTY

California Co.'s No. 1 Spikes Farm No. 2 ..... Show of gas, 1,980-90 ft; 6 bailers salt water per hr., 2,085-90 ft, drlg., 3,360 ft.

Humble O. & R. Co.'s No. 1 Pitchfork, Sec. 171, Blk. A-96, John H. Gibson Sur. ..... Drlg., 1,000 ft.

Midwests' No. 1 Patton ..... Drlg. by cas., 3,004 ft.

J. L. Pattison's No. 1 Patton ..... Slight show gas, 2,115-30 ft; S.D., 2,673 ft.

White Eagle's No. 1 Burnett estate ..... S.D. for 5-in., 3,440 ft.

LAMB COUNTY

Dan Freel et al's No. 1 Ellwood ..... New location.

Tolbert & Simms' No. 1 Elwood, NE SW SW, Sec. 14, Blk. B., R. M. Thompson Sur. ..... Rigging up.

LIPSCOMB COUNTY

Cal-Tex's No. 1 Bradford, C NE NE Sec. 899, Blk. 43, H. & T. C. Sur. ..... Spudded and S.D.

Camp Creek Oil Co.'s No. 1 Mrs. H. D. May, Sec. 612, Blk. 43 ..... S.D., 900 ft.

McCorkle's No. 1 A. Barton, NE cor. SW SE Sec. 504, Blk. 43, H. & T. C. Sur. ..... Water in lime at 4,126-40 ft. 6-in. set, 4,155 ft; S.D., 4,200 ft

Ozark Drlg. Co.'s No. 1 Frass, NE SE Sec. 106, Blk. 10, H. & T. C. Sur. ..... Rig on ground.

Smith, Kinsley & Ruby's No. 1 C. W. Jones, NE cor. SW, Sec. 100, Blk. 43 ..... Show oil, 3,520 ft; salt water at 3,900 ft; S.D.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles ranch ..... Small show oil, 1,133-40 ft. in sand; drlg., 1,225 ft.

MOORE COUNTY

A. O. Duggan's (was Shadler Bros.') No. 1 John Lowery, Sec. 237, Blk. 44 ..... Topped lime, 2,680 ft; set 8-in. at 2,770 ft; 4,000,000 ft. of gas, 2,980-3,020 ft; 15,000,000 ft. gas, 3,100-50 ft; (actual gauge) S.D., 3,605 ft; very slight show oil in lime; will ream 6-in. to 3,585 ft.

Prairie and Shamrock's No. 2 Gober, Sec. 16, Blk. M-21 .. Drlg., 1,685 ft.

MOTLEY COUNTY

Exploration Co.'s No. 1 Burleson ..... Spudded and S.D.

Exploration Co.'s No. 1 Tillson ..... S. D., 750 ft. for repairs.

Exploration Co.'s No. 1 Matador Land & Cattle Co., cen. SW, Sec. 37, John Gibson Sur. ..... Spudded and S.D.

Wheeler et al's No. 1 C. D. Bird, C NE Sec. 4, Blk. S, Stephens Sur. ..... Spudded and S.D.

OCHILTREE COUNTY

W. G. Burton's No. 1 Stickler, Sec. 579, Blk. 43 ..... Fish. 3 joints pipe, 3,940 ft.

Hamilton et al's No. 1 R. E. Wamble, Sec. 144, Blk. 43 .. S.D., 250 ft.

McCorkle Pipe Line Co.'s No. 1 R. H. Moore, Sec. 471, Blk. 43 ..... S.D., 1,600 ft.

McCorkle's No. 1 Weinett, Sec. 674, Blk. 43 ..... S.D., 850 ft.

Standard Dec. Co.'s No. 1 Bowden, Sec. 923, Blk. 43 ..... S.D., 900 ft.

OLDHAM COUNTY

Prairie O & G. Co.'s No. 1 Landegrin, SE cor. NE SW Sec. 46, League 310, Capital land ..... 1,900 ft. water, 4,085-93 ft; T.D., 4,518 ft; very small show oil; C.O.

PARMER COUNTY

Humble O. & G. Co.'s No. 1 Farwell; elev. 4,005 ft ..... Temp. abd., 3,600 ft.

POTTER COUNTY

Amarillo Oil Co.'s No. 1-B Masterson, Sec. 43, Blk. G-M-3, G. & M. Sur. ..... 500,000 ft. gas, 1,750 ft; S.D., 1,780 ft.

ROBERTS COUNTY

Big Bend Oil Co.'s No. 1 Mrs. H. Ledrick & Sons, Sec. 7, Blk. 5-A ..... Show gas, 4,990 ft; show oil, 4,992 ft; cas. set at 4,992 ft; S.D. 5,085 ft.

Murphy et al's No. 1 Gill, Sec. 31, Blk. M-2 ..... S.D., 650 ft.

Roco Oil Co., formerly Charles Page et al's No. 1 W. T. Hammon, Clay County school lands ..... Spud. and S.D.

C. C. Wilson, No. 1 A. H. Tandy, NE cor. Sec. 182, Blk. 42, H. & T. C. Sur. ..... Spud. and S.D.

SHERMAN COUNTY

Gibson Oil Co.'s No. 1 Bivins, Sec. 35, Blk. 3-B ..... 100,000 ft. gas, 2,016-26 ft; drlg., 2,425 ft.

Hagy & Harrington and Marland Oil Co.'s No. 1 S. F. Flores, C SW Sec. 64, Blk. 3-T, T. & N. O. Sur. ..... 8-in., 2,726 ft; 500,000 ft. gas, 3,048-50 ft; 1,200 ft. water, 3,145-50 ft; drlg., 3,530 ft.

Phillips Pet. Co. and Prairie O. & G. Co.'s No. 1 Price & Fuqua, C NE, Sec. 33, Blk. 2-B, G. H. & H. Sur. .. 100,000 ft. gas, 2,105-10 ft; drlg., 2,325 ft.

SWISHER COUNTY

Explta. Co.'s No. 1 W. C. Denwiddie ,Sec. 70, Blk. M-11, A. B. & M. Sur.; elev. 3,610 ft. ..... Rig on ground.

WHEELER COUNTY

Angus et al's No. 1 Vermillion, SW cor. NW SW, Sec. 80, Blk. 17, H. & G. N. Sur. ..... T.D., 2,139; S.D. in granite; 10,000,000 ft. gas, 2,040-45 ft.

E. L. Arnold's No. 1 M. J. Williams ..... Drlg., 1,450 ft.

Byrens et al's No. 1 Johnson ..... New location.

Foster et al's No. 1 S. H. McDonald, SE cor. NW SW, J. N. Lindsay Sur. ..... Spudded and S.D.

Hatcher et al No. 1 J. Hatcher, cen. NE SW Sec. 80, Blk. 23, H. & G. N. Sur. ..... Drlg., 1,130 ft.

Lyons et al's No. 1 Jackson, Sec. 11, Blk. 37, H. & G. N. Sur. ..... 1,100 ft. oil; granite wash, 2,290-2,300 ft; S.D. for storage; swabbed 100 bbls.

Marland Oil Co.'s No. 2 W. E. Bentley ..... S.D. by agreement, 2,277 ft.

Piney Oil & Gas Co.'s No. 1 M. E. Ackley, C NW NW Sec. 30, Blk. 24, H. & G. N. Sur. ..... Drlg., 1,705 ft.

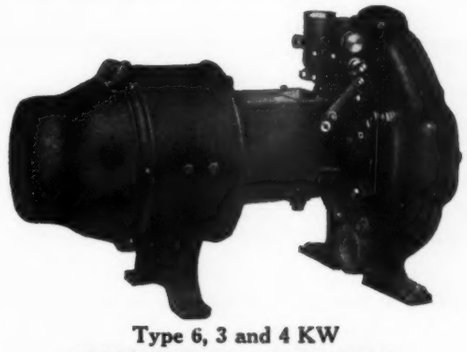
Piney Oil & Gas Co.'s No. 1 W. S. Walker, Sec. 44, Blk. 24, H. & G. N. Sur. ..... T.D., 2,280 ft; show gas; dropped 8-in. 25 ft; fishing.

Smith Brady et al's No. 1 P. J. Sorenson, Sec. 53, Blk. A-4 ..... S.D., 2,112 ft. for orders.

The Texas Company's No. 1 Bell, Sec. 71, Blk. 13, H. & G. N. Sur. ..... Gas 2,005 ft; swabbed 40 bbls. in 8 hrs. from granite wash, 2,145-55 ft; 1,000 ft. oil; T.D., 2,740 ft; will plug back.

The Texas Company's No. 1 Morgan, Sec. 93, Blk. 17 ... Drlg., 1,260 ft.

RED $ OR BLACK $
WHICH WILL IT BE?



Type 6, 3 and 4 KW
MOON TURBO GENERATOR

When you've finished the job, and the final reckoning is made—is your balance on the credit or the debit side of the ledger?

Reliable, unfailing performance on the part of your equipment is probably one of the most important factors in determining whether you operate at a profit or a loss.

You will find the New MOON Type 6 a profit-making lighting plant for you. It's on the job *all the time*, flooding your work with light—no lost hours through expensive night-time delays due to lack of light.

A MOON Lighting Plant on your job is one long step toward profit insurance.

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Why Experiment? O'Brien Derricks Will Drill Your Wells and Pull Your Casing

The inside construction of a joint in an O'Brien Derrick. The inside and outside reinforcing plates form a slot to receive the next higher leg.

Outside joint of an O'Brien Derrick. The slot formed by the two plates holds the legs in place, while bolting up, thus making fast erection easy.

O'BRIEN DERRICKS
Substantial and Safe in Any Field

Scientifically designed to meet the tremendous stresses and strains in drilling, there is no uncertainty about what O'Brien Derricks can do. Two dozen deep wells with a single O'Brien is not unusual service for these rigs. They are as permanent as it is possible to make them. Rugged, fireproof, windproof, easily erected and dismantled.

An O'Brien Derrick isn't cheap—but it is THE economical derrick from the time you buy it until the last well it's used on.

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35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

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REFINERY EQUIPMENT AT BARGAIN PRICES

From Sinclair Refinery at Vinita, Okla., and Kansas Oil Refinery at Coffeyville, Kans.

28—fire stills

6—Steam stills

40—Condenser boxes

15—Agitators

7—Dismounted car tanks

105—Storage tanks from 50 to 55,000-bbl. capacity

50—Steam pumps

20—Triplex pumps

1—7-ft.x60-ft. Rotary dryer.

300—Tons structural steel

300,000 Fire brick

4,000,000 Building brick

1—Complete lubricating plant (except chillers), used only about 18 months, including,

1—20-ton Carbondale absorption refrigerating plant.

2—48-in. Carbondale filter presses.

2—Allbright-Nell filter presses

Complete sweat pan house equipment.

10—5ft.x15-ft. filter tanks

Necessary pumps and accessories

15—Miles pipe; 2-in. to 8-in.

18—Grimes oil line pumps

—4¾-inx18-in. Pattin Bros. oil line pumps.

Complete detailed catalog upon request.

Inspection invited.

MACHINERY & SUPPLY CORPORATION

Box 616 Joplin, Mo.

BARGAINS FOR SALE

1—New No. 26 Star drilling machine, with 30 H.P. mounted boiler and complete set of tools.

1—No. 32 Steel Keystone drilling machine with 30 H.P. mounted boiler and complete set of tools.

1—No. 23 Star drilling machine with 25 H.P. boiler and complete set of tools.

1—No. 5½ Steam Keystone tractor drilling machine with complete set of tools.

1—D-Cyclone, gasoline, tractor drilling machine with complete set of tools.

1—No. 30 Special Sparta, gasoline, tractor drilling machine with complete set of tools.

One 1,200 bbl. steel riveted tank, knocked down.

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Leases and Royalties
W. S. PATTERSON
Pecos, Texas

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Tulsa, Oklahoma

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DELAWARE incorporations. Charters fees small, forms. Charles G. Guyer, 901 Market St., Wilmington, Del.

Kerosene Price Advanced in Chicago

Export Buying From East Strengthens It. Only Moderate Demand for Other Products at Opening of Week

By J. B. Wak'o

CHICAGO, Oct. 3.—Much strength was shown in kerosene Monday and most refiners advanced their quotations to 4½ cents. But one of the local offices of the larger refineries was quoting 4⅜ cents and the management stated that they were well sold up and would probably advance shortly. Extensive export buying by eastern refiners and export agencies has placed refiners where they can ask higher prices. There was quite a flurry in this market as dealers tried to cover sales made at 4¼ cents.

Aside from the activity in kerosene there was only a moderate demand for any product and several offices stated that their Monday morning business was very light. The demand for U. S. Motor gasoline was light and prices were unchanged. The higher gravities were in demand and prices were firm with a tendency towards an advance.

No change has been made in distillates but as a result of the larger buying of kerosene there is some expectation that distillates will be stronger. Gas oil is firm but some six months contracts went at 2½ cents for the first three months and 2¾ cents for the second three months.

Fuel oil is quiet and if anything a little easier in price.

Reports from the country distributors indicate that as a result of the heavy rainfall there has been a decided drop in the consumption of gasoline all over the territory.

Roads in Bad Condition

The storms, generally regarded as equinoctial, have been followed by much mud and many bad roads. One of the large refining offics here received from its Iowa representative last Friday a road map of the state with the condition of each road indicated. They ranged in degree from deep mud to merely slippery but the mileage of good roads shown was very small. An official of another refining office here returned the same day from a trip through northern Iowa out into Nebraska and he said that never again would he complain of the condition of the streets here.

In speaking of his trip this gentleman and others who are intimate with conditions in the country districts, said that they were discouraging. The attempts to obtain business, the methods adopted, the cutting of prices and the giving away of all profits by competing concerns is described as commercially if not legally criminal. We have reports of the lowering of prices here and there and it does not read as if it were important but these are but a few of the many, many instances of reckless competition that are found on a careful examination of conditions in the country trade. In many important cities in Indiana, the price has been cut until gasoline really nets the seller less than does his kerosene business, yet the cost of gasoline is at least 2 cents higher. A cut in a city like Indianapolis does not end at the city limits. It spreads and if the prices are not quickly restored to normal at the point where the reductions were started there is no doubt that it is only a matter of time until the entire state would be involved.

Indiana has been mentioned here but the condition is true of practically every state. The seller of gasoline at cut prices is flourishing in practically every state and every important trading center in the territory. There must be some reason and there is—the wide spread between the refinery price to the dealer and the selling price to the consumer.

Local Price Differences

In one Iowa small city a dealer has distributed cards entitling the bearer to a 4-cent reduction on all cash purchases made at the service station. This reduction with the state tax paid leaves the actual cost of gasoline to the motorist at that point 12 cents a gallon. In an Indiana city a free lance oil man, call him a bootlegger if it pleases, sold at 13 cents. The large local company put in a station under an assumed name and cut this price 1 cent. The free lance immediately put out a sign that the station across the street was owned by the large oil company and that it had been opened to drive him out of business so that the price could be advanced to the usual high price and the free lance is still doing the business. In one town there are two refinery-owned and operated stations. There is another station that sells the gasoline and lubricating oils of that refinery. The privately-owned station sells the gasoline from the refinery at 2 cents less and the lubricating oil at 5 cents less than the refiner's stations and advertises that it is the product of the same refinery. In one town there are two stations owned by the same oil company and they sell at 2 cents difference in the price.

Each and every one of these instances is only possible because the margin to the jobber is greater than the safety of the industry permits. These are but a few of the very many instances that have been told during the past week in this city by travelers over the territory. The refiner will say that the margin would not be too large if he were securing a fair price for his product. Why not sell at a fair price or not at all? A very well-known Mid-Continent refiner once said in a public address that the refiners knew what they ought to do but lacked the nerve to do it.

Market Reflects Situation

The Chicago market reflects this unsatisfactory situation of supply and demand. The demand was very good for immediate deliveries and the sellers have been shipping cars to their own order and selling them in transit. When the rains came and the road conditions became suddenly so bad, there was an almost immediate decrease in these orders to be filled from cars in transit. The cars came through to destination and stood on the tracks. At the margin of profit on tank car shipments it does not take many days of demurrage charges to eat up any possible profit. The result was that U. S. Motor gasoline towards the end of the week was offered at prices less than the recent market and occasionally sales were made at 6 cents with 6¼ cents quite common although the refiners were holding for 6¼ cents.

One large refiner apparently overstocked with this grade gave instructions to his salesmen to meet any competition and this forced others to do the same if they wanted some of this spot business. There were sales made at 6¼ cents right along for some of the buyers prefer to stick to a source of supply on whom they may depend and do not shop around. Another large refinery organization stated that it was trying to sell at 6⅜ cents but not making much progress.

Jobbers generally reported that outside of the cities, the consumption fell off materially with the bad weather and they look for the country demand to be rather slow until the roads are dried out from the recent rain and snow falls in the various parts of the territory. There has been little purchasing ahead for October. Some buying was done for known commitments but these were scaled down to a minimum in most cases. There were some deliveries still due on September purchases, but the quantities were not large and under usual conditions of demand would not matter but as it is, little accumulations are offered to so many possible buyers that the surplus is magnified. There was a better demand for the higher tests comparatively speaking and the offers were not large. One leading Mid-Continent refiner advanced the price of its 400 endpoint to 6¾ cents and the price of its 375 endpoint to 7¼ cents which prices were above the average market quotation, but being well sold up, that refiner was not begging for orders. The U. S. Motor grade was quoted by most at 6¼ cents but while quite a number held to that price others were meeting competition from reliable sources. With better weather and dry roads there is a feeling that considerable gasoline will be sold over October. If we are to have any good weather this season it will have to come then and we feel entitled to at least one month of normal weather out of the spring, summer and first part of the autumn.

Natural gasoline is still strong with a demand from the dealers who do their own blending and it may increase with the colder weather as some continue to buy their regular grade of gasoline and maintain the same degree of volatility by adding a larger percentage of natural gasoline. The demand is chiefly for the A and AA grades which have sold at 6 to 6¼ cents.

Kerosene Not So Active

The kerosene demand is not as active as it was and there has been only a limited business. Prices are held firmly but there are occasional offers of cars on the track and they are slow to move. One Chicago buyer received an overshipment of two cars and offered them to many of the possible buyers before finding a place to put the oil. In this instance the asking price was 4⅜ cents but buyers stated that they could buy at 4⅛ cents. Quite a number of the refiners are asking 4¼ cents for the 41-43 gravity and a small number 4⅜ cents but apparently the peak of the demand is passed. This demand as previously pointed out was not from any marked increase in the consumption but from the fall fill of the dealers' storage. This has been done for the most part, and the demand with the dealers is only normal. There has been little tractor demand of late, what there has been has come from the threshers. The fall plowing will be delayed a little by wet fields but this is not so much a rush case as the spring work which has to be completed by a certain time if possible to get the best results and the farmers go about their fall work more leisurely. Some of it is done with horses. There is no good reason for any cutting of prices. It certainly will not increase the consumption as the tank wagon prices for kerosene will hold about where they are in all probabilities. There is only a comparatively limited supply and some of the refiner-distributors buy for their own needs in the seasons of more active demand but their purchases will be less from now on. The export demand is steady with some recent buying and the export prices in cases have been advanced one-half cent by the Standard exporting organizations.

Distillates in Demand

Distillates have been in demand from householders, who began filling their tanks with the coming of cooler weather and have given the distributors a good run of business. There has been some improvement in the demand on refiners but it has not as yet reached any real activity in this market. Some of the refiners are still holding their stocks and making no effort to move them believing that the present market is too low and that they will be able to secure better returns later in the season after the real consumption has begun. Other refiners are well under contract at prices which are usually based on the market. There has been some deliveries of supplies to the local distributors here and some of them report that they are not in the market for further purchases at present—unless the price is very attractive.

The domestic fuel business is still new and conditions change so rapidly that the larger distributors want all sorts of protection. One of the large contracts last year permitted the purchaser to buy outside any month that he could get the oil at a less price than that named in the contract. The refiner might better have had no contract and sold the concern from month to month at the market but doubtless as indefinite contracts have been made this season. Really some of the contracts only oblige the refiner to sell if the buyer happens to want to buy at the price and dates designated in the contract. Some of the contracts made earlier in the season have been modified at the request of the dealer who claimed that he could make a better contract and threatened to do so unless the newer price were met or some concession made. The spot prices are a little more firm and some of the refiners are asking an eighth cent higher price, others a quarter of a cent. The consumers' tanks once filled, there is liable to be some easing off in the demand especially if the weather changes to clear and warmer.

Gas Oil Steady

Gas oil has been just about steady in this market. Reports have been received that claim a considerable increase in the stocks of gas oil in the field over August and the first half of September but it is assumed that the bulk of this stock is straight run oil for which the demand is moving along with very little change in volume or direction. There has been just about the usual amount of buying from the industries and the distributors of fuel oils. Gas companies have also bought for their requirements but the larger buyers have not been active in the market and it has continued to be a run of small orders. The strong feature of the market so far as it has shown strength has been in the zero oils which are wanted by domestic burner distributors. Even they are unwilling to pay prices that meet the views of refiners. Some desirable oil with low flash and cold test was sold at 2¾ cents during the week but other refiners refused to sell at these prices and asked around 3 cents from 2⅞ to 3⅛ cents with one refiner asking 3¼ cents for his product. Some of the refiners claim that a really desirable gas oil with a low cold test and flash, sweet odor and a light color will be scarce later in the season and are holding for at least 3½ cents. There is, of course, a possibility that the accumulations of this grade of oil during the next 30 to 60 days may be considerable but at present buyers claim that stocks are hard to locate of this grade of gas oil. One refiner stated that he sold a dealer in tank car lots some oil that was desirable in every way but which he sold as amber and was surprised to find that it was resold as straw. There is a good demand for 28-30 gas oil and other gravities a little lower than the 32-36 but the price is so little lower than the same grade of oil will bring in the latter gravity that the difference in the cost of a

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Kerosene Features Eastern Market

Gasolines Continue Weak; Lubricants Firm, But Gas Oil and Fuel Oil Were Weaker. Exports Fair

By N. O. Fanning
New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

NEW YORK, Oct. 1.—Continued strength in kerosene, weakness in gasoline, firmness in lubricants, wax and petrolatum, and weakness in gas and fuel oil were the features of the eastern refined oil markets during the week. The export market continued to give a fairly good account of itself, with good inquiries and several orders involving bulk, barrel, and case deliveries.

Weather conditions continued quite favorable for gasoline and lubricating oil consumption by motor vehicles; industrial conditions continue behind expectations and orders for lubricants and wax in this connection are correspondingly slack. The export situation in demand for products used in connection with industrial operations is improving steadily.

Refiners on the Atlantic seaboard are understood to have let down considerably on operations, especially with respect to "cracking." They are using less high grade crude and running less raw material themselves as a result of their ability to buy such products as gasoline, kerosene, and fuel oil direct from other sources at low prices. Operations on the the Atlantic Coast since September 1 are estimated to have declined about 15 per cent from the August average. This is partly seasonal, but is attributed more to factors already mentioned.

Eastern refiners are drawing more largely on South American oil. It is said 30 to 40 per cent of the material received is topped crude, which has already been treated at refineries at Tampico or Curacao. The remainder has to be run as crude in Atlantic Coast refineries. Crude and products from South America are becoming a growing factor in the oil markets of the United States; to an alarming extent from the viewpoint of Mid-Continent producers, in the opinion of some oil men, in as much as South American crude can be delivered more cheaply at Atlantic Coast refineries.

Gasoline Continues Weak

The gasoline situation on the Atlantic seaboard is mixed in character, depending upon the section. During the past week the Standard Oil Co. of Kentucky advanced the tank wagon market in Kentucky 3 cents a gallon. At the same time leading marketers cut the tank wagon price of gasoline at Springfield, Mass., to 12 cents. In most other sections the retail and tank wagon situations are "spotty."

As evidenced by the situation in Springfield, Mass., and many other districts in the Atlantic Coast territory the overabundance of retail outlets is having a depressing effect on the gasoline situation. And students of the situation do not believe there is any indication of improvement in this direction. It is fully expected, however, that the arrival of fall and winter in the offing will prove a severe test for many of the service stations not economically located, unless the demand for gasoline should be far above present expectations.

At last there is some indication of a slowing down in the activity of constructing new gasoline filling stations. It seems at least that investors and speculators in this business have seen the handwriting on the wall. It only remains now for the test of soundness for those stations already built.

The tank wagon market, although weak, is displaying some indications of having reached the bottom in as much as there is a tendency to stop offering extraordinary inducements on the part of those trying to develop outlets for their material.

Atlantic seaboard refiners are selling all the U. S. Motor gasoline in tank car lots that they can for 8¼ cents a gallon. No indication of a willingness to hold off at this price is evident, and the only conclusion is that refiners have more gasoline at hand than they know what to do with, for the present, at least.

Numerous gasoline users, especially commercial companies, have learned that they can buy U. S. Motor in larger lots at much lower prices than could be obtained at service stations and the tank car market has broadened tremendously. This month has witnessed the period of house moving, and the van companies are reported to have done a record "intercity" business. In one apartment in New York alone vans brought the household effects of families from Scranton, Pa., Fall River, Mass., Baltimore, Md., and Troy, N. Y. This gives an indication of the importance of this traffic on the demand for gasoline. These van concerns buy most of their gasoline from bulk stations, although of course they have to depend in part on service stations in the longer hauls.

Indications are that New York State may have a 2-cent or 3-cent gasoline tax beginning January 1, 1928. However, these expectations have been entertained so hopefully before on the part of advocates and yet been blasted in the legislature that it makes it rather uncertain to predict a tax. Some automobile associations which had in previous years bitterly opposed a tax are said now to be in favor of it, but there are still some more or less influential organizations opposed. The pressure of the need for road construction and improvement is expected to throw the balance in favor of a tax, provided a tax bill can be passed which will provide for its use largely for those purposes.

Kerosene Strong

When the leading marketer of domestic kerosene on the Atlantic seaboard advanced water white kerosene, at refinery, 1 cent a gallon (in two installments of one-half cent each), the trade was taken by surprise, as it had become accustomed to weakness in the market and did not believe anything short of a change in the crude market would bring improvement. The situation now stands, however, with the leading marketing company holding to its advance of 1 cent and most other leading marketers still a half cent behind.

As a result, water white kerosene, in tank cars, at eastern refineries ranges from 7 to 7½ cents a gallon, with the largest factor quoting the higher figure. As its competitors have raised their prices from 6½ to 7 cents, it is expected they will go a step further in the near future and meet the 7½-cent price.

Many factors are contributing to the almost solitary strength of kerosene among the various petroleum products. There is less overproduction of kerosene, in as much as numerous refiners had been paying more attention to the gasoline market; the demand for kerosene for domestic heating in kerosene stoves and oil burners was helped by unusually cool weather during August and September; while the export market improved considerably, beginning late in August, and is still holding up well.

The trade is so elated at the advance to 7½ cents that it is not hurrying to forecast higher prices. It will be satisfied if the gain already registered is held.

The next move in kerosene is expected to be in the tank wagon market. Marketers look for improvement in prices in that field within two weeks, especially in certain sections where tank wagon prices have been out of line. In Baltimore, for instance, the tank wagon price of 10 cents is not expected to last much longer.

One kerosene authority says: "Both refiners and consumers are showing more confidence in this market and purchasers during the past few days have made some inroads on stocks. The threat of an unseasonal cold wave impelled many big jobbers who had been holding off as long as possible into the market. Prices are stiffening all along the line."

Gas Oil

It is fully expected in some quarters that gas oil prices will be influenced more by kerosene than the fuel oil market. Oil burners, which are expected to eat up considerable oil this winter, use a grade of kerosene running as low as 36 gravity, which means that it will make some inroads on the supply of gas oil. However, experience of the past may show this theory to be wrong. Other factors may overshadow this in the market.

At least gas oil maintains a firm tendency, with "28 plus" quoted at 5½ cents a gallon in tank cars at Bayonne. Several good sized domestic contracts are said to have been closed at this figure. However, the principal contracts for gas oil will not come up for signature until next spring, so that any great change in prices may not occur until about that time.

Probably the course of the gasoline market and "cracking" activity will have something to do with the gas oil situation this winter. If this proves to be the case, the outlook is not so bright.

Diesel Oil

The Diesel oil market is pursuing an even course. Although there doubtless is considerable competition in this field the situation is considerably stronger than in bunker oil, which requires a much lower grade now in ample supply. Local refiners are quoting $2.10 a barrel for Diesel oil for marine use, with a lighterage charge of 6½ cents a barrel extra.

Marketers of Diesel or industrial fuel oil for domestic use report a notable increase in demand, especially in the industrial regions of New York, Connecticut, New Jersey, and Pennsylvania. Deliveries from seaboard refineries in tank cars are therefore steadily increasing. There is little or no competition from the West, as freight rates favor seaboard makers.

In all industrial cities along the Atlantic Coast there are also heavy inquiries for fuel oil for power plants and other industrial establishments. In many instances prospective users have found some difficulty in contracting for a supply of the higher grade of fuel oil.

Bunker Fuel Oil

Some weakness was reported in the bunker fuel oil market, despite the fact that all marketers are holding prices up to the $1.60-$1.65 level on the Atlantic seaboard. The report that some marketers in Philadelphia were selling at $1.50 a barrel to the trade could not be confirmed, and it is believed if any business was done at this figure it was a small amount.

Some stir was caused in oil circles here when it was learned a large contract for bunker fuel oil for the Matson Line had gone to the Shell Co. of California, a subsidiary of the Dutch-Shell group. It was learned that this contract automatically passed to Shell when the company contracted several months ago to handle oil production of the Honolulu Consolidated Oil Corp., which had the fuel oil business of Matson on the Pacific.

It may be pointed out at this time that the Dutch-Shell combine is a big factor in the bunker oil market on the Atlantic seaboard, having facilities at several big ports. This business is not handled by the Shell Union Oil Corp., however, but by the Asiatic Petroleum Co., a direct subsidiary of the Dutch-Shell. The Matson contract probably means the first entry of the Shell Union into the Atlantic Coast markets.

Lubricating Oil

Local refiners report a good demand for motor oils but a disappointing market for industrial lubricants. Prices of lubs have not changed during the week.

Competitively, the lubricating oil market is in a fairly good position. This is attributed to the comparatively small number of refiners in the business, and the keenness with which these have followed the actual demand without attempting to produce beyond it.

There is a good demand for cylinder oils and bright stock, the former, however, being attributed to export buying.

Red and pale paraffin oils are dull. Jobbers have lightened up considerably on their requirements for these grades, but stocks in their hands are not excessive.

Paraffin Wax

A strong demand for 130-132 and 135-137 refined wax is reported with some refiners holding out for prices one-quarter cent above those which have recently prevailed. However, buyers are still getting 130-132 for 4¾ and 135-137 for 5¾, and there does not seem to be a keen enough demand at the higher levels to establish 5 and 6 cents as average quotations.

The development of chemicals making it easy for housekeepers to make preserves, jellies and jams is said to have had a beneficial effect on the domestic wax market, paraffin wax being used to seal the jars. Refiners trace much of the improvement in the domestic market to this fact. The very best grades are required for this use, which is becoming widespread in communities where little "preserving" had been done previously.

Petrolatum

The petrolatum market, while continuing in a firm position, reveals no radical change from a week ago. Dark green is in fairly good demand, but it is still available for 1⅞ cents a pound. A substantial sale of lily white and snow white were reported at 7⅜ and 8⅜ cents a pound, unchanged from last week.

Export Market

Demand for bulk gasoline and kerosene at New York during the past week lagged perceptibly. However, a strong tone was maintained in the case division. The Standard Oil Co. of Jersey advanced kerosene in cases one-half cent a gallon to 17.15 cents a gallon for standard white and 18.15 for water white, this being the second half-cent advance this month. Prices are now 1 cent above the low of the year.

Local refiners report an improvement in the demand for flotation oil in Chile and Peru and have been making larger deliveries to those countries in the last few weeks. In fact Chile has become a pretty large buyer of lubricants, flotation oil and wax in the New York market, despite the apparent proximity of refineries located in Peru and California. It is said mining operations in Chile are increasing.

While New York exporters are handling their share of the export trade and are not complaining, they point to the increase in crude oil exports in August this year compared with August a year ago as denoting a trend in refining abroad. This trend, they believe, may be further enhanced by tariff regulations now being put into effect in foreign countries.

The Anglo-Persian Co. may build a refinery in Turkey in connection with the organization of a subsidiary in that country to exploit Turkey's resources. The

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Correcting Unsafe Plant Practices

First Necessary to Locate Hazardous Features of Operation and Then Work Out All the Required Remedies

Ralph E. Motley*
Director Plant Personnel and Employment, The Atlantic Refining Co., Philadelphia.

"How We Locate and Correct Unsafe Practices" is really a word picture of what we do when we "go out after them." It is not a new story. But it is a subject which bears repetition and one which usually offers a few choice morsels for those who are really interested in improving their methods of locating and correcting unsafe practices. A detailed account of the procedure we follow would be imposing on good nature, so I have subjected it to a "cracking" process and trust that the picture I will paint may be of some interest and value to you.

There are two chief bodies around which the safety activities of our plant are centered: the Safety Committees, and the Safety Department, each contributing in its own way to the locating and correcting of unsafe practices.

Ten subsafety committees, composed of four or five persons each (usually foremen) and representing the various departments of the plant, make regular weekly inspections of all portions of the plant according to a predetermined schedule. These inspections are made on Monday or Tuesday of each week so that the reports will be in the hands of the general safety committee on Thursday morning. The reports, in addition to covering the entire results of the inspections along with the seemingly desirable recommendations, also include any other safety items of importance which come to the attention of the committee while on the particular inspection. Once a month each of the subcommittees meets with the safety engineer and discuss such things as: how to make more efficiently the assigned inspection; what to look for; ways of gaining the desired end without antagonizing foremen or men in the particular department being inspected, and other pertinent subjects of general interest to the committee. Each committeeman wears a company safety badge which identifies him as a bona fide safety committeeman.

General Safety Committee

The general safety committee which is composed of the safety engineer as chairman, a representative from each of the main divisions of the plant, mechanical, operating, sales, package, miscellaneous, marine, engineering, and myself, meets each Thursday morning. At this meeting the reports sent in by the subcommittees are thoroughly discussed, digested and then forwarded along with the necessary recommendations to the respective superintendents involved. A tickler system is maintained by which the committee is kept informed as to the final disposition of the reports. In addition to handling the reports of the subcommittees, the general safety committee plans and puts into operation safety campaigns and rallies, prepares copy for posters and flyers, calls injured employes into the meeting where it is thought a cross-examination is necessary, and makes recommendations for disciplining employes who have needlessly had an accident, or who have subjected other employes to unnecessary hazards. The membership of the general safety committee is changed each year, while the subcommittees are changed twice each year. This method of rotating affords all foremen an opportunity to serve on the committee and also gives the company the benefit of the experiences and ideas of a much larger group. This safety committee organization functioning in all parts of the plant, at all times, is, to our minds, indispensable in "Locating and Correcting Unsafe Practices."

The safety department, composed of a safety engineer in charge of eight safety inspectors, is adequately equipped to cope with virtually any emergency which might arise. This equipment includes: an ambulance with the usual accessories; a safety patrol containing a ladder, blankets, boots, stretcher, M. S. A. inhalator, McCaa apparatus and two large oxygen cylinders; an inspection truck carrying a Burrell Indicator, masks, boots and oilskins; and also four hose masks, 10 acid masks, 10 ammonia masks, and 9 organic vapor masks. In addition to this, the Safety Department maintains five rescue houses, each containing two blankets, one cart, one hose mask, one harness, ropes, M. S. A. inhalator and a stretcher.

In addition to installing guards, inspecting ladders, platforms and various other equipment, the safety department strictly enforces rules regarding the entering upon or cleaning of any tank. Any tank, regardless of its previous contents, is inspected and passed as gas free by the safety department before anyone is allowed to enter for any purpose. The tests are made by one of the safety inspectors wearing a McCaa one-half hour apparatus and using a Burrell detector to analyze the contents. If the detector shows more than a 25 per cent gas content, no work is to be done unless masks are used, or until a subsequent test shows the gas content to be below the required point. If the work is urgent, men are supplied with hose masks and are allowed to clean the tank if it does not pass the test. In all cases, a member of the safety department stands by to make sure that all necessary precautions are taken, and to lend intelligent assistance if necessary.

Testing for Gas

In high sulphur tanks such as storage tanks or distillate tanks of Crane Upton Crude, a preliminary test is made for hydrogen sulphide. To determine whether there is hydrogen sulphide present in the particular tank, a member of the safety department makes a test for this poisonous gas with a Tutweiler Burrette. If the Burrette does not indicate the presence of H_2S, the Burrell gas test is then made. The tank must be free of H_2S as well as below 25 per cent for gas before anyone is allowed to enter. In order to protect those persons who have occasion to work on the top of high sulphur tanks, a sign warning everyone to stay off the tank is placed in the middle of the stairway so persons attempting to reach the top of the tank will be warned of the danger involved. On any vent work on top of tanks or in taking samples or gauges from the thief hole, gas masks must be worn on all tanks containing hydrogen sulphide gas.

Before the inception of the tests for gas content of tanks and other containers ready to be repaired, the company had several unfortunate experiences, but since these precautions have been followed, there have been no fatalities due to these causes.

Before being allowed to operate a fuel oil burner independently, the employe must be trained by a competent instructor and then examined by a member of the safety department, in order that the safety of the individual operator as well as his companion employes may be assured. Gaseous repair work, still burning, elevator inspection, guard design, building inspection and special inspections are also functions of the safety department.

Virtually all of the 350 foremen and many of the men at the Philadelphia plant have been instructed in, and are now capable of intelligently performing, first aid and artificial respiration. This instruction is given by the safety department under the supervision of the safety engineer. In addition to holding "refresher courses" for these foremen, it is planned to extend this course to all employes at all the plants in order that everyone will be competent to lend such assistance should the occasion arise.

Plant Regulations

The safety department is held responsible for the strict observance, by the employes affected, of a set of rules known as "Plant Regulations." These regulations have been formulated by the superintendents, foremen and the safety department, are issued by the plant manager's office, and include such subjects as:

Precautions to be taken in ridding of vapors, stamping, welding and repairing of steel packages.

Method of work and attire of men working on acid lines and tanks.

The placing of planking where men must work on tank roofs.

The carrying of water in, and the stretching of nets outside, tanks being constructed.

The cleaning and loading of tanks and tank cars, and the use of masks.

Precautions to be taken when repairing stills, agitator and ships, and many others where it seems advisable to issue such regulations.

As another step in our endeavors to make sure the regulations are being strictly adhered to, we are now drawing up rules and regulations for each individual craft. For example, the pipe fitters' rules would include such things as: when goggles should be worn, methods of working with various tools, precautions to be taken on different lines, kinds of pipe to use for different installations, and many other essential safety precautions peculiar to that particular craft. These regulations are really nothing more than just what applies to the particular craft, as taken from all the existing rules and regulations and supplemented by other essential precautions which have not as yet been issued in regulation form. The advantage of individual regulations such as these is that the employes are not forced to digest several hundred rules which might not be at all applicable to their particular work.

Every accident report is thoroughly investigated by the safety department in an endeavor to determine whether the employe was personally responsible, and if so, to make sure that the relative chances for a recurrence to another employe is practically negligible.

The method we employ in keeping accident statistics enables us to analyze them individually and collectively by causes, character of injury, part involved, foreman, time of day, day of week, department, nationality, sex, color, education and marital state. All this information is contained on the accident report form which is made up by the dispensary, and which is subsequently punched on Hollerith statistical cards by the use of a proper set of codes. Then by the use of an electric sorting machine, any desired combination of contributing causes or factors can be determined for the entire plant or for the individual department. For example, we might wish to determine the "number of married Italian laborers receiving contusions of the head by falling objects at 2 a. m. on Fridays." A monthly analysis is made for cause of accidents and the respective foreman involved. The former analysis points out the chief factors to be considered during the following month, and the latter analysis enables us to administer the necessary remedial ointment to the chief offenders. Each year a complete analysis is made of all the information contained on the card, for each department and for the entire plant. Analyses such as these afford some very illuminating facts, and are well worth looking into. A detailed account of the facts brought out in this yearly analysis is contained in the March issue of Manufacturing Industries.

Many accidents attended by severe injuries have been caused by the simple slipping of a tool. The danger of injury is greater when men are working in elevated places, because if a tool slips at that time, the man may lose his balance and fall; and it is seldom brought out in the inquest that someone has been sufficiently instilled with the spirit of safety to go around placing feather mattresses in the several places scheduled for the receiving end of the man's anotomy. This hazard may be minimized by, (1) making sure the worker has in his possession good tools with which to work, and (2) by making sure that the worker uses his tools properly. A temporary lay-off for the first offense and dismissal for the second offense has practically eliminated the giving out of bad tools by the tool house employes. In addition to a monthly check-up of tools by the safety department, one tool house man devotes his entire time to inspecting tools which are out in the plant on holdout orders, and instructing the workers in the proper use of them. The tool house contains adequate equipment for testing the capacity and strength of various equipment such as chain blocks, pneumatic hammers, gauges, hoisting machines and air compressors. Regular tests on these are made every two months. A monthly inspection is made of all acetylene equipment by submerging the torches under full pressure in water, in order that leaks which might cause a serious accident may be located and made safe.

Competitive Measures

Numerous manufacturers and retailers have justly complained that competition has forced them out of business, but in safety work, "competition is the life of the party." Posters, rallies and many other forms of creating interest all have their places, but if the spirit of competition has not been aroused, the fullest results will not, in most cases, be obtained. In an endeavor to create competition and arouse additional interest among our four plants, a special 1927 safety campaign was launched, the keynote of which was competition. All kinds of advertising media were prepared, including a distinct safety paper. Immediate interest was aroused by allowing the employes to suggest names for this safety paper. Out of the numerous names submitted, The Siren of Safety was selected as the one most applicable to the proposed magazine.

A silver safety plaque was then purchased to be awarded quarterly to the plant having the fewest lost time accidents per 1,000 hours worked during the respective three month periods, and to become the permanent property of the plant having the best record over the entire year. Space is provided for engraving the names of the winners by quarters and also for the entire year. The Pittsburgh plant was the winner for the first three months, and, incidentally, succeeded in going through the two months of February and March without a single lost time accident. In view of the fact that an extensive construction program was in progress during that time, this record was exceedingly encouraging. Because of its perfect no-accident record during the months of April, May and June, the Brunswick, Ga., plant was awarded the trophy for the second three months. A keen spirit of rivalry exists among the four plants, and is entirely due to the fact that whole-hearted competition has been aroused. As an indication of this competitive spirit, the fol-

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lowing te'egram was received from the plant manager at Brunswick, Ga., when it was determined that his plant had won the coveted trophy for the second three months. "Please tell the Pittsburgh plant to send us that trophy P. D. Q. and kiss it good-bye, as it is coming to Dixie to remain forevermore."

At the Philadelphia plant we are holding an interdepartment competitive safety race in an endeavor to get our hooks on that trophy, wh'ch we have, so far, been unsuccessful in obtaining. To start the ball rolling, the superintendent of the mechanical department cha'lenged all other departments to a contest for fewer lost time accidents for the remainder of the year. The large bulletin boards at the main gates of the plant were changed in such a manner that any employe cou'd easily determine which team was leading for the month, and also which departments were responsible for any accidents which might have occurred. The acc'dent experience over the past few years at the Philadelphia refinery has shown the mechanical department to be the chief offender. Since the cha'lenge in March, the mechanical department has had several no-accident months, is leading in the interdepartment contest, and accidents in all other departments have been greatly reduced.

Over the past five years, an average of 17 lost time accidents have occurred each month at the Philadelphia plant. While a great number of those involved in the loss of only a day or two, nevertheless, they were considered as lost time accidents. In October, last year, by a special safety campaign, we succeeded in going through the entire month without a single lost time accident. Instead of having from 10 to 25 accidents per month this year, we are having only three or four, and all indications point to an even greater reduct on.

PRICE OF KEROSENE ADVANCED IN CHICAGO

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tank car is not great. However, the profits in the distribution of domestic fuel oils is so close that every little helps. There is no oil burner made and listed the makers of which recommend a lower gravity of fuel than 28 degrees gravity. In the depth of winter when the furnace is not down long enough to really cool off, a slightly heavier grade and higher flash will answer but for early deliveries the full specifications should be observed if trouble is to be avoided. The average oil burner selling agency will claim that the oil is wrong if there is any trouble in the operation of the burner so the oil man should be posted on the oil best suited to each burner and refuse if necessary to deliver a heavier grade of fuel oil. There are some burner manufacturers that work with the oil man to the extent that even where they believe that the grade of oil is not suited to the burner, they will notify the oil company and give them a chance to investigate the oil and be sure that the right oil is delivered.

Fuel Oil Demand Better

Fuel oil is moving at the same rate as during the past several months. There is some litt'e increase in the demand as the industries begin to strike their stride for fall and as a little oil is being used for heating the larger buildings that use the heavier oils. The really active inquiry is for the zero oils and for these prices are firmly held. In the heavier grades below the 24-26 gravity there is a great deal of competition and prices are cut and so the buyers claim is the quality of the oil delivered.

There is practically no Smackover fuel oil now coming to this market. Some crudes from other fields are being delivered on contracts which may pass for Smackover and perhaps are sold as such but which are not. Since the recent reduction in the price of the heavy crude from the Smackover Field prices have been reduced and are now quoted by some in a nominal way at $1.05 to $1.07½ but there is almost no business being done in this oil. Some has been delivered to local refiners for their lubricating plants, the Urania crude being an especially good lubricaing crude but only occasionally available. The coal strike has been settled and it is stated that this agreement will be approved by the officials of both parties and the production of coal will begin very shortly. The report has had no affect on the market price of fuel oil here. There has been no shortage of coal and the average manufacturer has not even known that there was a coal strike unless he happened to see some mention of it in the daily papers. The outlook is for a steady fuel oil market from now until the larger demand comes with December when the consumption may be said to reach its real activity.

Little Change in Lub Oils

There has been little change in the lubricating oil situation but what change there has been is according to representatives of the Mid-Continent refiners, for the worse. They claim that the Texas Coastal lubricants are being sold in this territory and prices are cut badly. They also assert that some of the local refiners are at least meeting this competition and while the Mid-Continent refiner c'aims a superiority for his lubricating oils it is difficult to make sales against the prices and the prestige of some of the largest refining organizations in the country here and in the Southwest. The demand is not far from an average for the season and the consumption cannot be far from an average for the time of year both for motor oils and for industrial lubricants.

Tank Wagon Situation

There has been no general change in the tank wagon situation over the territory. On the first of October the Standard Oil Co. of Ohio made a reduction of 2 cents in its tank wagon and station prices and it is reported here that the company will do away with the Q. D. A. in Ohio but will continue to allow a discount of 2 per cent on its coupon books for cash. The same prices will prevail at the bulk railroad plants as at the drive-in stations of the organization. This cut is really a belated recognition of conditions in that state and does not mean much in the present market. The new prices in Ohio are 17 cents tank wagon and 19 cents service station which prices include a 3-cent tax.

Over the Indiana territory most mixed conditions prevail. At Grand Rap'ds, for example, where there has been a bad price war, conditions were thought to have been adjusted and prices were returned to normal but more trouble was brought about by the insistence of certain companies on selling at less than the normal price and the result was a second cut in price. In Peoria where the prices were cut to 12 cents flat, including a state tax of 2 cents, there has been a partial return to the normal price and the tank wagon is now 14.2 cents and stations 16.2 cents. On the same day the price at Des Moines was reduced from 17 cents tank wagon to 13.9 cents, and so it goes. Conditions are reported by managers of organizations who have been out in the territory as chaotic.

The gasoline business is, of course, well past its peak but the growth of the use of the domestic oil burner is giving the average dealer another department in which to use his organization. The trouble seems to be that the lesson of cut prices learned in the gasoline end is being repeated in the domestic fuel oil departments.

KEROSENE FEATURES EASTERN MARKET

(Continued from Page 129)

project is being participated in by the Angora government and private Turkish banks and bankers.

Official Russian statements declare that the Anglo-Russian break has not affected the sale of Russian petroleum products on the world markets. They say that the Naphtha Syndicate is continuing its activities in Turkey, France, Italy, Germany and even in England. Despite the keenest competition on the part of Dutch-Shell and Standard, it is claimed that Russian products are continuously finding new customers. The French Naval Ministry recently placed an order for 33,000 tons of fuel oil, this being the third order of its kind within 18 months. The Italian Naval Ministry has also purchased a further 3,000 tons of light Grosny gasoline to be delivered before October 1. It is believed that Italy will become the best customer for Russian oil fuel.

Plans of the Naphtha Syndicate for the 1927-1928 fiscal year include prospecting for oil in the Apsheron Peninsula, Kuban, Urals, Emba, Sakhalin Island, Cheleken Island, Uzbekistan, and a number of entirely new localities.

The French petroleum periodical, Le Courrier des Petroles, as an opponent of the proposed French oil monopoly, claims that the French government received 1,026,765,000 francs during 1926 from customs duties and other taxes on petroleum products, which it estimates as amounting to about 71 francs on each hectoliter, while the net profit of importers and distributors is approximately 6.66 francs per hectoliter. The publication argues that the small additional profit would not be worth necessary investment, and that it would be impracticable to contract for sufficient quantities of imported crude in case refining is done within France.

Principal Exports

The following table shows principal exports of petroleum and petroleum products from New York during the last three weeks (all figures in gallons unless otherwise noted):

	Sept. 28	Sept. 21	Sept. 14
Gasoline:			
Bulk	.....	2,805,054	5,205,127
Cases	489,500	1,635,170	100,000
Kerosene:			
Bulk	.....	.....	1,094,195
Cases	619,300	2,260,810	940,000
Lubricating oil:			
Bulk	.....	.....	2,049,600
Barrels	830,350	1,182,950	882,700
Cases	104,100	355,160	50,010
Lubricating grease:			
Barrels	1,131,750	98,100	106,650
Paraffin wax:			
Bags (lbs.)	514,800	275,000	1,789,480
Barrels (lbs.)	112,575	828,875	199,500
Petroleum asphalt:			
Barrels (tons)	.....	1,313	663

The foregoing figures include all shipments of 500 bbls., 1,000 cases, or more.

Tanker Market and Movement

The oil tanker market is somewhat mixed as a result of the different positions revealed by different routes. There is a noticeable easing of rates for the Gulf to Atlanitc Coast trade, a fixture having been recorded during the week at 23 cents, a new low on the movement.

It is now believed generally that the recent easing of rates in the tanker market was due to several large oil companies withdrawing from the Gulf-Atlantic trade so far as the fixture of additional vessels was concerned. The intercoastal oil movement from the Gulf Coast is said to be decreasing with renewed activity in the South American and California trades.

New fixtures reported during the week included the following:

Tanker Mirita (Nor.), Curacao to New York, 23 cents, September loading.

Tanker Atlantic Sun (Am.), gasoline, Gulf to Atlantic Coast, 25 cents, discharging at Philadelphia and Boston.

Tanker Sabine Sun, Gulf to New York, 23 cents, to Boston, 25 cents, October loading.

Tanker Hagan (Am.), Gulf to Boston, end of September, 25 cents.

Tanker Scottish Borderer (Br.), October-November loading, California to United Kingdom-Continent, 26s. 6d. This rate is down 2s. 6d. from the last comparable charter.

Although the activity of oil tankers in the South American-Atlantic Seaboard and South American-European trades is showing a marked gain, the total tanker movement of oil to the Atlantic Seaboard is declining as a result of smaller shipments from Gulf Coast ports.

The total movement of oil by tanker to the Atlantic Seaboard as estimated from arrivals at Atlantic ports amounted to 3,720,000 bbls., a daily average of 531,000 bbls. This compares with a total of 4,801,000 bbls., or 686,000 bbls. daily, the preceding week.

The Gulf Coast of the United States for the week ended September 28 contributed to this total 2,138,000 bbls., a daily average of 305,000 bbls., against 2,576,000 bbls., or 368,000 bbls. daily, the week ended September 21.

Receipts from the Pacific Coast for the week were 498,000 bbls., a daily average of 71,000; compared with 545,000 bbls., or 78,000 bbls. daily, the week before.

Imports from Mexico of 343,000 bbls. for the week, a daily average of 49,000 bbls., compared with 87,000 bbls. daily the preceding week, while imports from South America averaged 106,000 bbls. daily, against 153,000 bbls. the week before.

The following table shows estimated daily average receipts of crude and refined oil by water at Atlantic Coast ports for the last three weeks; also monthly record for the last 12 months (figures in barrels):

	Week Ended		
	Sept. 28	Sept. 21	Sept. 14
Gulf Coast	305,000	368,000	248,000
Pacific Coast	71,000	78,000	84,000
Mexico	49,000	87,000	66,000
South America	106,000	153,000	81,000
Total	531,000	686,000	479,000

Daily Averages by Months

1927:	Gulf	Pacific	Mexico	S. Am.	Total
Aug.	397,000	90,000	80,000	78,000	645,000
July	406,000	83,000	78,000	49,000	616,000
June	378,000	118,000	68,000	47,000	611,000
May	332,000	58,000	91,000	53,000	534,000
April	388,000	93,000	69,000	61,000	611,000
Mar.	345,000	103,000	36,000	81,000	565,000
Feb.	379,000	89,000	40,000	48,000	556,000
Jan.	362,000	73,000	49,000	61,000	545,000
1926:					
Dec.	363,000	57,000	49,000	61,000	530,000
Nov.	335,000	62,000	56,000	40,000	493,000
Oct.	270,000	71,000	61,000	43,000	445,000
Sept.	299,000	98,000	63,000	58,000	518,000

The foregoing figures are based on the carrying capacity of incoming oil-laden tankers.

SHREVEPORT MARKET CONTINUING STRONG

SHREVEPORT, La., Oct. 3.—Although inquiries for motor fuel and kerosene slackened to some extent, the tank car market in the north Louisiana-Arkansas district continued strong, due to the scarcity of these products. Refiners here still are far behind with their orders and claim to be drawing heavily on their stocks.

U. S. Motor gasoline was not available under 6½ cents from any source here, but only in scattering cases were sellers getting any more than this. Kerosene was in ready demand from 4½ to 4⅝ cents where a scattering car was available, but the bu'k of production in this division is contracted for a month ahead.

A substantial volume of inquiries for gas oil came in during the week for seasonal consumption, but sellers here are not taking on much of this business, due to the present low spot market, which generally is quoted at 3 cents. Some customers are being taken care of for immediate shipment as low as 2¾ cents for dark gas oil.

Fuel oil is not much in demand on the spot market, but, as with other products, little is offered, as rai'roads recently contracted the bulk of production of refiners here. However, when moved on the open market, this product brings from $1.07½ to $1.12½ cents.

Several refiners have been buying substantial lots of natural gasoline out of north Texas and Oklahoma points the past week on a basis of 5⅝ cents f.o.b. Group 3 for Grade C material. North Louisiana natural gasol'ne (Grade C) continues to be quoted from 6¼ to 6½ cents f.o.b. Monroe.

R. L. LUCAS DIES

R. L. Lucas, president of the Lucas Drilling Co. of Okmulgee, Okla., one of the best-known contractors in the Mid-Continent Field, dropped dead suddenly at his home in that city last week. Mr. Lucas was 50 years old, and had been located for 15 years at Okmulgee where he had been associated with W. C. Newman and Max Fuhrman, president of the Fuhrman Petroleum Co. He had devoted his entire life's work to the petroleum industry, starting at Butler, Pa., his birthplace. He is survived by his widow, his mother, Mrs. Martha Lucas of Butler, Pa., seven brothers, C. W. Lucas of Okmulgee, Okla., J. E. Lucas of Wetumka, Okla., Nobel F., W. J., Andrew and P. D. Lucas of Butler, Pa., and Dick Lucas of Toronto, Pa.

REFINING AND MARKETING

GOVERNOR OF KANSAS WANTS ROADS FOR TAX

TOPEKA, Kans., Oct. 1.—Governor Paulen of Kansas has objected to an increase in the gasoline tax from 2 cents to 4 cents until the State has outlined a definite road-building program. The issue has been before the governor before and he was successful in defeating the bill last year but was unable, in turn, to provide for the establishing of a highway commission which he said was a prerequisite to his accepting a higher tax. The governor's statement in part follows:

"It is not fair to assess the people of the State with a heavy gasoline tax unless we have some system by which we can build roads for the people of the State. Under the present system I cannot see that more money would relieve the situation.

"If they will give us a state system, and let us build state roads, then I would favor the increase, and I believe the people of the State would consent to the increase. But the people will oppose the increase in gasoline taxes until they know that they are to get the roads they are paying for."

"We are spending $10,000,000 a year, but we haven't a road that will get us across Kansas."

SHIPPING BOARD ASKS BIDS FOR FUEL OIL

The United States Shipping Board Merchant Fleet Corp. is asking for bids on 13,000,000 bbls. of grade "C" fuel oil for delivery over 1928 at various Atlantic, Pacific and Gulf ports. The quantity includes 1,300,000 bbls. to be used at the ports by loading steamers and the balance is to be taken out in the following approximate quantities:

	Bbls. Per Mo.
Boston	20,000
New York	300,000
Philadelphia	60,000
Baltimore	50,000
Norfolk	50,000
Charleston	25,000
Savannah	25,000
Jacksonville	15,000
Tampa	15,000
New Orleans	175,000
Galveston-Houston	200,000
Port Arthur	40,000

The usual form of contract is being submitted and the bids are to be read at 2 p. m. October 10 at Washington, D. C.

ANNOUNCES NEW GREASE

CHICAGO, Oct. 1.—The Viscosity Oil Co. of this city announces the compounding of a new lubricant which it has named "Graigrene Grease." It is stated that this new lubricant is a purely vegetable oil compound and various claims for its superiority are made. A wide list of distributors has been secured and the producers of "Graigrene Grease" look for a warm welcome from motorists as it is stated to have great merit in cold weather, not congealing or stiffening.

VIRGINIA OIL MEN TO MEET

The Virginia Independent Oil Men's Association has announced the dates October 20 and 21 for its convention at Norfolk, Va. The details of the program are being worked out.

TEXAS GASOLINE TAX

Texas gasoline taxes for August amounted to $1,700,000 and was $100,000 more than the preceding month. The largest payments include $377,374 from the Gulf Refining Co., $341,604 from the Magnolia Petroleum Co., $325,808 from The Texas Company and $123,659 from the Pierce Petroleum Corp.

QUOTATIONS BASED ON A. N. G. M. SPECIFICATIONS

Beginning in this issue of The Oil and Gas Journal, the weekly quotations on natural gasoline in the Mid-Continent Field are based on the specifications adopted by the specifications committee of the Association of Natural Gasoline Manufacturers. These specifications became effective October 1.

With the new specifications the gravity range of Grade C is changed from 80-90 Baume to 80-92 Baume. In addition all grades must meet the noncorrosion test. This test is according to "A. S.T.M. Method D 130-22 T Copper Strip" which is the same as "Method 530-21 Corrosion test at 122 Fahrenheit," published in Technical Paper 323A revised by the Department of the Interior, Bureau of Mines, March 18, 1924. A full description of the tests is obtainable in pamphlet form from the Association of Natural Gasoline Manufacturers, fifth floor, Cosden Building, Tulsa, Okla.

It is stated that approximately 75 per cent of the natural gasoline now being manufactured in the Mid-Continent area conforms to the new specifications. It is expected that this quantity will now be increased so that practically all the gasoline manufactured will be uniform as to specifications.

GREENSLADE TO HANDLE SUN CO.'S PRODUCTS

The Greenslade Oil Co. of Detroit, Mich., will handle the products of Sun Oil Co. exclusively in its territory according to an announcement in Detroit, Tuesday. The Greenslade company is one of the largest independent jobbing concerns of the Middle West and in the past has been a large buyer of gasoline in the Mid-Continent Field.

It has been rumored in the jobbing trade for several weeks that the Sun Oil Co. which has one of its refineries at Toledo, Ohio, had purchased the Greenslade company. This sale has not been confirmed by officials of the company.

TO USE NATURAL GAS

Natural gas is replacing fuel oil in many industries where the gas is available. Such a change was recently completed in the lower Rio Grande Valley where the Central Power and Light Co., serving 19 cities with electricity, converted its equipment so as to use natural gas. The company had previously been burning fuel oil and heavy crude. It will retain the old fuel oil equipment and will use it in emergencies.

CHICAGO ASSISTANT MANAGER

CHICAGO, Oct. 1.—The Marland Refining Co. announces that T. R. (Roy) Vaughn has been transferred from Ponca City to Chicago and made assistant manager of the Chicago office. Mr. Vaughn previously represented the Marland company in northern Illinois and is no stranger to the customers of the company.

DEBAUFER OIL CO SELLS

CHICAGO, Oct. 1.—The DeBaufer Oil Co. of Appleton, Wis., has been purchased by the Cities Service Co. of Winona, Wis. This company purchased the Winona Oil Co. of Winona and is now adding to its stations through the purchase of the Wisconsin company. The DeBaufer Oil Co. is one of the older oil companies and has stations at Neenah, Menasah and other neighboring towns as well as at Appleton. H. A. DeBaufer will continue as manager.

EASTERN PIPE LINE SALES ARE PROTESTED

OIL CITY, Pa., Oct. 1—Several independent refiners and stockholders have protested to the Public Service Commission of Pennsylvania against the sale of the pipe lines belonging to the Pure Oil Pipe Line Co. and the Producers & Refiners Pipe Line Co. in that area to the Southwest Pennsylvania Pipe Lines and National Transit Co. It is expected the hearing will be concluded next week.

The amount involved in the sale of the lines to the Southwest Pennsylvania Pipe Lines is given as $165 000 and that of the lines to the National Transit as $660,000.

The protest to the sale made in behalf of the Independent Refining Co., the Continental Refining Co., Empire Oil Works, Inc., American Oil Works, Titusville Oil Works, and Crystal Oil Works declares there "is a greater necessity at this time for the operation of said pipe line system than heretofore because of the increasing demand for crude oil of said grade and of the pure quality with which the said independent refineries have in the past been supplied and can continue to be supplied and which is necessary in order to make the high grade lubricants and to continue the successful operation of said refineries."

In the protest it is declared that prior to 1892 all crude oil gathered by pipe lines in the vicinity of Oil City and Titusville was handled by the Standard Oil group. It stated that "by reason of the monopoly so created and existing the independent refineries in the vicinity of Oil City and Titusville could not purchase crude oil except from the Standard Oil Co. of New Jersey nor obtain deliveries of crude oil by pipe line for the operation of said refineries except from the pipe lines operated by the pipe line companies of the Standard Oil group." The protest says that the "pipe line companies frequently made partial deliveries of crude oil not of the grade and quality purchased by said independent refineries but in part of the grade purchased mixed and contaminated with crude oils of an inferior grade and quality as well as with water, filth, dirt and oil tank deposits by reason of which practices the business of said independent refineries was throttled and stifled and seriously handicapped."

Need of Line

This need for an independent pipe line system brought into existence in 1892 the Producers & Refiners Pipe Line Co., states the protest. "After the establishment of this pipe line said independent refineries were enabled to purchase in the open market crude oil and to not only purchase crude oil of a specific grade but to exact and to actually receive delivery of a pure quality of the precise grade of crude oil purchased."

The protest states that the pipe lines affected by the proposed sale were built and operated for the purpose of handling crude oil for the independent refineries in the vicinity of Oil City and Titusville.

"Without the continued independent operation of said pipe line system," declares the protest, "the business of the independent refineries will be seriously damaged and interfered with and the delivery of crude oil of said grade and the pure quality necessary will be menaced and your protestants believe will be unable to be obtained by them as a monopoly of the pipe line industry will again be in existence with all of the evils which attended the former monopoly and control, contrary to public policy, and for which no public necessity exists."

Under the terms of the proposed sale the pipe lines of the Pure Oil Pipe Lines south of the southerly line of Butler County would be sold to the Southwest Pennsylvania Pipe Lines and those north of that point and also those lines belonging to the Producers & Refiners Pipe Line Co. to the National Transit Co.

INFERIOR LUBRICANTS BEING INVESTIGATED

CHICAGO, Oct. 1.—The American Fair Trade Association, through its chief of department of investigations has filed complaint with the state attorney's office that certain distributors of lubricating oils in this city are defrauding the public through the sale of inferior oils in place of the higher grade oils advertised by the seller. The campaign has been active for several weeks and during that time evidence, it is claimed, has been secured against a number of oil sellers.

In some instances at least the used oil that is drained from the cars is allowed to stand until the solid impurities settle and the clear oil at the top is sold as first grade oil.

In each case purchases were made, the oil being received in a specially prepared container which was immediately sealed and analyzed. If not good oil, a second sample was secured and an analysis made. If this, too, proved poor oil, a third sample was secured and at the same time a photograph was made of the attendant supplying the oil.

The representative of the league states that the campaign is nation wide. The effort is being made not so much because of the small amount of money that is made by the oil distributor through this practice as against the damage done to cars through the sale and use of poor oil. The state attorney's office is to make a further investigation. One warrant was issued against a garage owner, fraudulent advertising being the charge made.

CHICAGO POST OFFICE CONTRACT AWARDED

CHICAGO, Oct. 1.—Jewett & Sowers Oil Co. today was awarded the contract to supply the city post office department with gasoline for the last quarter of 1927. Several companies bid for the business. The Jewett & Sowers Co.'s retail bid was a flat price of 12 cents for the three months. The wholesale bid was 2½ cents above the tank car price.

The company has had the post office business several times in the past. The Shaffer Oil & Refining Co. had the contract for the three months ending October 1.

ILLINOIS GASOLINE TAX

CHICAGO, Oct. 1.—The state auditor at Springfield estimates that the gasoline tax of 2 cents a gallon netted the State between $700,000 and $800,000 during August, the first month. He stated that the returns for the first month were incomplete as many checks had to be returned for adjustment. The estimate for future months is approximately $1,000,000 per month. August was the first month and a great many consumers filled their storage at the last moment. The 50 per cent of the tax due the counties will be paid December 31.

BIG EXPORT ORDER

The Anglo Mexican Petroleum Co., Ltd. (Royal Dutch-Shell) has awarded a contract to the Chicago Bridge & Iron Works involving 9,000 tons of tank work. It includes the fabrication and erection of more than 50 tanks and all of the miscellaneous plate work in connection with the building of a large new refinery on the island of Aruba, D. W. I.

Brief Items for Plant Operators

Turner Valley Area Has Unique Natural Gasoline Operation

By Victor Lauriston

CHATHAM, Ontario, Oct. 1.—A recent bulletin issued by the Canadian Institute of Mining and Metallurgy deals at considerable length with operations in the Turner Valley Field. The bulletin places the daily output of the field at approximately 1 210 bbls. of which 875 bbls. is crude naphtha and 335 bbls. crude oil. The bulletin says:

"A gasoline absorption plant was erected in 1919 by the Calgary Petroleum Products, Ltd., to extract the wet gas from their wells Nos. 1 and 2. This plant was destroyed by fire in October, 1920. The Royalite Oil Co. was then formed and in 1921 constructed the present gasoline absorption plant and compressor station, the latter being required to boost the pressure of the gas so that it could be driven to Calgary. In the compressor plant six 80-horsepower gas engines were installed, connected directly to the compressors and this plant was duplicated in 1923 after the completion of another well.

"On October 14, 1924, Royalite No. 4 well came in with a production of 20,000,000 feet of gas and about 500 bbls. per day of crude naphtha, 73 degrees A.P.I., the temperature of the gas being 22 degrees Fahrenheit below zero, with a hydrogen sulphide content of 640 grams per 100 cubic feet, rendering it unfit for domestic consumption, and it became, therefore, necessary to build a purification plant large enough to treat all the gas delivered to Calgary. This plant was erected in 1925 and is being enlarged.

"The plant is of the liquid purification process type, being 4 per cent sodium carbonate solution and scrubbing the gas in absorbers 36 inches by 60 feet at 300 pounds pressure. The used solution then passes through actifiers, in the form of tanks 15 feet by 54 feet, filled with wood baffles over which the solution drips in counter current to air blown from the bottom at low pressure. Between 60,000,000 and 90,000,000 feet of gas is treated daily.

"As a result of scrubbing the sulphur content is reduced from 6.40 grs. to 5 grs. per 100 cubic feet. The motive power of the plant is supplied by several of the engines, originally used as compressor units, the compressors not being needed now owing to the high pressure of No. 4 well, estimated at 2,000 pounds or more per square inch if the well were to be closed in.

"The gasoline is held in storage one day and then pumped through a 4-inch line to the Calgary refinery, where it is treated and blended into suitable motor fuel. Two pipe lines deliver gas from the field to Calgary, one 10-inch and one 6-inch, in addition to the 4-inch crude naphtha line.

"The Imperial Oil refinery at Calgary covers an area of 135 acres and employs upwards of 200 men, the pay roll being approximately $300,000 yearly. The capacity is 6,000 bbls. per day. The plant is most modern and complete, including a cracking plant, and operates on Montana and Alberta crudes. The superintendent, C. Moore, reports that the Turner Valley production is very satisfactory from a refining standpoint, that the crudes have a good proportion of straight run gasoline and refined oil, that the sulphur content is low and that there is considerable wax in the lower cuts.

"The Regal Oil Refining Co.'s plant at Calgary has only been operating for a few weeks. It has a capacity at present of 750 bbls. per day and is operating on Turner Valley crude entirely."

PROPER FIRST AID EQUIPMENT IMPORTANT IN SAFETY PROGRAMS

T. N. Shaw
Assistant Director of Industrial Relations, The Midwest Refining Co., Midwest, Wyo.

Care of the injured employe logically begins with first aid, and so in dealing with my subject I am going to tell first how we are organized and equipped to handle first aid.

Training—For a number of years we had most of our locations fairly well supplied with first aid materials, but it was not until the fall of 1922 that we started our first systematic training in first aid. The Bureau of Mines system of training was adopted as our standard and representatives of the Bureau came into our field to give the training. We have had them each year since and in each of our locations the training has been given. Last year at the close of the training period, we had nearly 100 per cent of our employes trained. First aid teams were formed in nearly all of our departments and a big contest conducted by the Bureau of Mines was held last fall.

Equipment

Our equipment consists of three types of containers. First we have a cabinet calculated to be fastened on the wall. It is about 8 by 16 by 22 inches inside measurement, is supposed to have a considerable quantity of each of the articles specified and is a supply base for the smaller kits of that particular location. It is usually located either in office or warehouse and furnishes dressings for injuries that are brought in. When located at "wild cat" wells or isolated places this cabinet is supplied with several remedies as well as first aid. We have 44 of this type in use.

A second type of container is a portable outfit and is carried on trucks accompanying large gangs. It is a box 5½ by 11 by 19 inches and is filled with an assortment of supplies suitable to the needs of a gang of a dozen or more men. We have 72 of this type in use.

One of these containers filled especially for severe burns or injuries is located in each of our 22 booster stations, which are fairly evenly divided throughout the field. These kits are sealed and marked "for use in severe cases only." At these booster stations we also have a stretcher and roll of blankets, so with each of our field offices having equipment supplies are quickly available at most any place about the field.

A third type of container measures 3 by 6 by 9 inches and is equipped with a variety of articles for first aid but of necessity a small quantity of each. About 400 of this type are scattered throughout the organization. Each truck and car has one; they are supplied to rod and tubing crews, connection crews, drilling crews, etc. Before the small kits were put out we had an average of about 10 infection cases per month; now they seldom occur.

It is one problem to properly locate first aid equipment, but to keep the containers filled with supplies is another problem. Depending on the other fellow is not successful, and after trying several other methods we adopted our present Postal Card System. Each month a postal card is sent to each cabinet, the card has a return coupon addressed and stamped for return to the supply base. On this return coupon are listed the supplies needed. Since installing this system of checking, we have had no trouble from our kits being without supplies. A few of the smaller kits in the hands of the pushers in the Salt Creek Field are checked and replenished by our safety inspector at the monthly safety meetings.

After first aid comes the medical department. Our present hospital in the Salt Creek Field has accommodations for about 40 patients, but in emergency can care for twice that many. A nurses' home is operated adjacent to the hospital and will accommodate about a dozen nurses. The regular staff consists of two doctors and of course, the number of nurses varies with the number of patients. Besides caring for the company's injured employes, this hospital serves the general needs of the community.

In each of two other locations of the company, we operate a hospital and employ full-itme physicians jointly with one of the other companies; but in all other locations local physicians and hospitals are used.

Use Public Hospitals

When located where it is possible to use public hospitals and employ regular practicing physicians, I would strongly recommend it in preference to operating your own. The cost would be much the same, but even if a saving could be made it does not offset the grief attached to operating your own. It is harder to satisfy people with a doctor than with a religion; it is better to let them do their own selecting or at least give them a choice of several, and when you have your own hospital you can't do it.

We can handle almost any type of injury in our hospital, but when specialists are needed we either call them in or send the patient to them. We would rather spend money to repair a man than to settle with him; however, when a permanent disability is incurred the case is turned over to our legal department to be settled according to the law in the state where the accident occurred.

*Petroleum Division, National Safety Congress, Chicago, September 27-30.

AMONG THE TECHNICAL MEN

J. H. Robertson, chief chemist for the Pierce Petroleum Corp., received his early technical training at Purdue University, graduating from that institution in chemical engineering. While there he was honored with a membership in Tau Beta Pi, an honorary engineering fraternity. His first practical experiences in the industries included research and plant work in cotton seed oil refining, soap making and in cement mills.

J. H. Robertson

Along with his laboratory work, Mr. Robinson takes an active part in the meetings of the American Chemical Society and is a member of the D-2 Committee of the American Society for Testing Materials.

In 1916 he entered the petroleum industry as chemist for the Standard Asphalt & Refining Co. at Independence, Kans. His work first included a study of the processing methods and he was later made processing engineer. In 1917, the plant was purchased by the Empire Gas & Fuel Co. and he was made resident chemist in that year.

Five years later he joined the Pierce Petroleum Corp. as refinery chemist and was made chief chemist for the corporation last year. This places Mr. Robertson as the director of all laboratory research and control work for all of the properties. The research laboratory is located at the Pierce refinery at Sand Springs, Okla., while the control laboratories are located at the various plants. This includes laboratories at the refineries in Sand Springs, Okla.; Tampico, Mexico; Texas City, Tex.; Fort Worth, Tex., and at a grease plant in St. Louis, Mo.

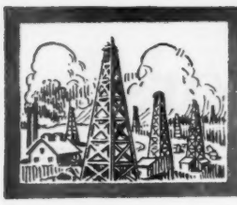
BUREAU OF STANDARDS BEING REORGANIZED

WASHINGTON, D. C., Oct. 1.—An important change in the administrative organization of the Bureau of Standards, which it is believed will make for increased efficiency through a better grouping of the Bureau's numerous activities, has been announced by the Director, Dr. George K. Burgess.

Dr. L. J. Briggs has been appointed assistant director in charge of research and testing, while Ray M. Hudson becomes assistant director in charge of commercial standards. The regrouping is a recognition of the importance of standardization in the commercial world, this portion of the Bureau's work having grown with astonishing rapidity during the last few years.

The Bureau's activities will be divided into two main groups. The first, under the immediate supervision of Doctor Briggs, will include all the Bureau's scientific research and testing, the development, construction, custody, and maintenance of reference and working standards, and their intercomparison, improvement, and application in science, engineering, industry, and commerce.

The second group, headed by Mr. Hudson, will include the supervision, direction, formulation, and co-ordination of commercial standards, with particular reference to the needs of industry, involving the oversight of the division of simplified practice, division of commercial standards, and part of the work of the division of building and housing relating to codes and standards. In addition, the correlation of the work of the Federal Specifications Boards with commercial practice and liaison duties with other branches of the Department of Commerce and with other departments in questions relating to commercial standards, will be included in this group.



REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

	Oct. 4		Sept. 27		Sept. 20	
OKLAHOMA (Group 3)—						
50-52 450 endpoint (Naphtha)	.06		.06		.06	
56-58 450 endpoint	.05¾	.06	.06		.06	
58-60 450 endpoint	.05¾	.06	.06		.06	
58-60 437 endpoint (U. S. Motor)	.06	.06¼	.06⅛	.06¼	.06⅛	.06¼
60-62 400 endpoint	.06½	.06⅝	.06⅝		.06½	.06⅝
64-66 375 endpoint	.07	.07⅛	.06⅞	.07	.06⅞	.07
68-70 360 endpoint	.07¼	.07⅜	.07	.07⅛	.07	.07¼
64-66 437 endpoint (blend)	.06⅛	.06¼	.06⅛	.06¼	.06⅛	
KANSAS—						
58-60 437 endpoint (U. S. Motor)	.06¼	.06⅜	.06⅜	.06⅝	.06⅜	.06⅝
NORTH TEXAS—						
56-58 437 endpoint	.05⅞		.05⅞		.05⅞	
58-60 450 endpoint	.05¾	.05⅞	.05¾	.05⅞	.05¾	.05⅞
58-60 437 endpoint (U. S. Motor)	.06	.06⅛	.06	.06⅛	.06	.06⅛
60-62 400 endpoint	.06½		.06½	.06⅝	.06¼	.06⅝
64-66 390 endpoint		.07	.05⅞	.06¾	.06⅝	.06¾
64-66 375 endpoint	.07	.07¼	.06¾		.06¾	
68-70 360 endpoint	.07¼		.07		.07	
64-66 437 endpoint (blend)	.06	.06⅛	.06	.06⅛	.06	.06⅛
NORTH LOUISIANA—						
58-60 437 endpoint (U. S. Motor)	.06½		.06⅜	.06½	.06⅜	.06½
ARKANSAS—						
58-60 437 endpoint (U. S. Motor)	.06⅜	.06½	.06½	.06¾	.06½	.06¾
PENNSYLVANIA—						
52-54 Naphtha	.08	.08¼	.07¾	.08	.07¾	.08
54-56 Naphtha	.08	.08¼	.08	.08¼	.08	.08¼
58-60 Gasoline	.08	.08¼	.08	.08¼	.08	.08¼
60 Gasoline	.08¾	.09	.08¾	.09	.08¾	.09
62 Gasoline	.09¼	.09⅝	.09¼	.09⅝	.09¼	.09⅝
64 Gasoline	.09½	.09¾	.09½	.09¾	.09½	.09¾
CALIFORNIA—						
58-60 437 endpoint (U. S. Motor) domestic	.08½	.09	.08½	.09	.08½	.09
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.06		.06		.06	.06⅛
56-58 450 endpoint	.06	.06⅛	.06	.06⅛	.06	.06⅛
58-60 437 endpoint (U. S. Motor)	.06⅛	.06¼	.06⅛		.06⅛	.06¼
60-62 400 endpoint	.06¾		.06⅝	.06¾	.06½	
64-66 375 endpoint	.06¾	.07⅛	.06¾	.07	.06¾	.07
68-70 360 endpoint	.07⅜	.07½	.07¼	.07½	.07½	.07¾
64-66 437 endpoint (blend)	.06⅜	.06½	.06⅜	.06½	.06¼	

NATURAL GASOLINE

	Oct. 4		Sept. 27		Sept. 20	
OKLAHOMA (Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06		.06	.06¼	.06	.06¼
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06		.06		.06	.06¼
Grade B, 76-83.9, 375 e.p., rec. 85%	.05½	.05⅝	.05⅝		.05⅝	
Grade BB, 84-92, 375 e.p., rec. 85%	.05½	.05⅝	.05⅝		.05⅝	
Grade C, 80-92, 375 e.p., rec. 78%	.05½		.05½		.05½	.05⅝
NORTH TEXAS—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06		.06		.06	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06		.06		.06	
Grade B, 76-83-9, 375 e.p., rec. 85%	.05½	.05⅝	.05½		.05½	
Grade BB, 84-92, 375 e.p., rec. 85%	.05½	.05⅝	.05½		.05½	
Grade C, 80-92, 375 e.p., rec. 78%	.05½		.05⅝	.05½	.05⅝	.05½
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.06¼		.06¼		.06¼	
Grade BB, 84-92, 375 e.p., rec. 85%	.05¾		.05¾		.05¾	
Grade C, 80-92, 375 e.p., rec. 78%	.06	.06¼	.05¾		.05¾	
CALIFORNIA—						
75-85, 375, 390 endpoint	.08½	.09	.07	.07½	.07	.07½
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06		.06	.06¼	.06	.06¼
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06		.06	.06¼	.06	.06¼
Grade B, 76-83.9, 375 e.p., rec. 85%	.05⅝		.05⅝		.05⅝	
Grade BB, 84-92, 375 e.p., rec. 85%	.05⅝		.05⅝		.05⅝	
Grade C, 80-92, 375 e.p., rec. 78%	.05½		.05⅝		.05⅝	

Note: All natural gasoline except California is noncorrosive.

BURNING OIL

	Oct. 4		Sept. 27		Sept. 20	
KANSAS—						
41-43 water white Kerosene	.04½	.04¾	.04⅜	.04½	.04⅜	.04½
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	.04½	.04⅝	.04¼	.04½	.04¼	.04⅜
42-44 water white Kerosene	.04¾		.04½	.04¾	.04⅜	.04½
NORTH LOUISIANA—						
41-43 prime white Kerosene	.04½	.04⅝	.04½		.04⅜	.04½
NORTH TEXAS—						
41-43 water white Kerosene	.04½		.04	.04¼	.03⅝	.03⅞
40-42 water white Kerosene	.04¼	.04⅜	.03⅞	.04	.03½	.03⅝
ARKANSAS—						
41-43 water white Kerosene	.04¼	.04½	.04	.04¼	.04	.04¼
PENNSYLVANIA—						
43 Kerosene prime white	.05⅞	.06⅛	.06	.06¼	.05⅝	.05⅞
45 Kerosene water white	.06	.06¼	.06¼	.06½	.06	.06¼
46 Kerosene water white	.06¼	.06½	.06¾	.07	.06¼	.06½
47 Kerosene water white	.06¾	.07	.07	.07¼	.06¾	.07
300 Mineral Seal	.07	.07¼	.07	.07¼	.07	.07¼
CALIFORNIA—						
38-40 water white Kero. (high burning test)	.05	.05½	.05	.05½	.05	.05½
Engine distillate, 43-45 445 endpoint	.07½	.08½	.08	.08½	.08	.08½
Engine distillate, 42-44 480 endpoint	.07	.07½	.07¾	.08	.07¾	.08
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white Kerosene	.04⅜	.04½	.04¼	.04⅜	.04⅛	.04¼
42-44 water white Kerosene	.04¾		.04⅝	.04¾	.04½	.04⅝

FUEL OILS

	Oct. 4		Sept. 27		Sept. 20	
KANSAS—						
22-26 Fuel Oil	.85	.92½	.85	.92½	.85	.92½
18-22 Fuel Oil	.82½	.85	.82½	.85	.82½	.85
32-36 Gas Oil	.02⅝		.02⅝		.02⅝	
38-40 Distillate	.03¼		.03⅛	.03¼	.03⅛	.03¼
OKLAHOMA (Group 3)—						
Below 18 Fuel Oil	.72½	.75	.75	.80	.75	.80
18-22 Fuel Oil	.77½	.80	.80		.80	
22-26 Fuel Oil	.80	.82½	.80	.82½	.80	.82½
24-26 Fuel Oil	.82½	.85	.82½	.85	.82½	.85
26-30 Fuel Oil	.87½		.87½		.87½	
28-30 Fuel Oil	.92½	.95	.92½		.92½	
32-36 Gas Oil (dark)	.02½		.02½		.02½	
32-36 Gas Oil (straw overhead)	.02⅝		.02⅝		.02⅝	
36-38 Distillate	.03	.03⅛	.03		.03	
38-40 Straw Distillate	.03⅛	.03¼	.03⅛	.03¼	.03⅛	.03¾
NORTH TEXAS—						
24-26 Fuel Oil (sellers' cars)	.80	.82½	.80	.82½	.80	.82½
32-36 Gas Oil (straw)	.02¼	.02½	.02¼	.02½	.02¼	.02½
38-40 Straw Distillate	.03	.03⅛	.03		.03	
NORTH LOUISIANA—						
18-20 Fuel Oil	1.07½	1.12½	1.10		1.10	
32-36 Gas Oil	.02¾	.03	.02¾		.02¾	
ARKANSAS—						
36-38 Distillate	.03¼	.03½	.03¼	.03½	.03¼	.03½
32-36 Gas Oil (straw)	.03¼		.03¼		.03¼	
16-20 Refinery Fuel Oil	1.00	1.05	1.00	1.05	1.00	1.05
GULF COAST (South Texas)—						
Gas Oil	.04		.04		.04	
Fuel Oil	1.60	1.65	1.60	1.65	1.60	1.65
PENNSYLVANIA—						
30-34 Fuel Oil	.04¼	.04½	.04¼	.04½	.04¼	.04½
36-40 Fuel Oil	.04½	.04¾	.04½	.04¾	.04½	.04¾
CALIFORNIA—						
33-36 Distillate	.03¾	.04	.03¾	.04	.03¾	.04
27-32 Distillate	.03¼	.03¾	.03¼	.03¾	.03¼	.03¾
*15-20 Fuel Oil, Bunkers (at tide water)	1.00		1.00		1.00	
15-20 Fuel Oil (cargo lots)	.90		.90		.90	
27 plus Diesel	1.15	1.19	1.15	1.19	1.15	1.19
CHICAGO DISTRICT (Based on Group 3)—						
24-26 Fuel Oil (sellers' cars) Group 3	.82½	.85	.82½	.85	.85	.87½
22-26 Fuel Oil (sellers' cars) Group 3	.80	.82½	.80	.82½	.82½	.85
18-22 (Group 3)	.77½	.80	.77½	.80	.77½	.80
16-20 Smackover	1.05	1.07½	1.05	1.07½	1.10	1.12½
32-36 Gas Oil (zero)	.02¾	.02⅞	.02⅝	.02⅞	.02¾	.03
32-36 Gas Oil (industrial)	.02½	.02⅝	.02½	.02⅝	.02½	.02⅝
36-38 Distillate	.03		.03		.03	
38-40 Straw Distillate	.03⅛	.03¼	.03⅛	.03¼	.03¼	

*Bunkers.

LUBRICATING OIL AND WAX

	Oct. 4		Sept. 27		Sept. 20	
OKLAHOMA (Group 3)—						
100 vis., 2 color, 20-25 cold test	.06¼	.06½	.06¼	.06½	.06¼	.06½
100 vis., 3 color, 20-25 cold test	.06	.06¼	.06	.06¼	.06	.06¼
150 vis., 3 color, 20-25 cold test	.08¼	.08½	.08¼	.08½	.08¼	.08½
150 vis., 4 color, 20-25 cold test	.08	.08¼	.08	.08¼	.08	.08¼
180 vis., 3 color, 23-28 cold test	.09¾	.10	.09¾	.10	.09¾	.10
180 vis., 4 color, 23-28 cold test	.09½	.09¾	.09½	.09¾	.09½	.09¾
180 vis., 5 color, 23-28 cold test	.09¼	.09½	.09¼	.09½	.09¼	.09½
200 vis., 3 color, 23-28 cold test	.10	.10½	.10	.10½	.10	.10½
200 vis., 4 color, 23-28 cold test	.10⅛	.10⅝	.10⅛	.10⅝	.10⅛	.10⅝
200 vis., 5 color, 23-28 cold test	.10¼	.10½	.10¼	.10½	.10¼	.10½
240 vis., 3 color, 25-30 cold test	.13¾	.14	.13¾	.14	.13¾	.14
240 vis., 4 color, 25-30 cold test	.13¼	.13½	.13¼	.13½	.13¼	.13½
240 vis., 5 color, 25-30 cold test	.12¼	.12½	.12¼	.12½	.12¼	.12½
280 vis., 3 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
280 vis., 4 color, 25-30 cold test	.15	.15½	.15	.15½	.15	.15½
280 vis., 5 color, 25-30 cold test	.14	.14½	.14	.14½	.14	.14½
Cylinder Stocks:						
600, steam refined, light green	.07	.09	.07	.09	.07	.09
600, steam refined, dark green	.05	.06	.05	.06	.05	.06
190-200 vis. @ 210 Bright Stock	.31	.33	.31	.33	.31	.33
150-160 vis. @ 210 Bright Stock	.26		.26		.26	
Waxes:						
124-126 White Crude Scale Wax	.02¾		.02¾		.02⅝	
PENNSYLVANIA—						
34 Neutral	.07½	.08	.07½	.08	.07½	.08
34 Sundebloom	.08¾	.09	.08¾	.09	.08¾	.09
36 Miners' Neutral	.07½	.07¾	.07½	.07¾	.07½	.07¾
150, 3 color	.27¼	.27½	.27½	.28	.28	.28½
180, 3 color	.31	.31½	.31	.31½	.32¼	.32½
200, 3 color	.33½	.33¾	.33¾	.34	.34	.34½
220, 3 color	.36	.36½	.36	.36½	.36	.36½
600, steam refined	.09½	.10	.09½	.10	.09½	.10
635, steam refined	.10½	.11	.10½	.11	.10½	.11
650, steam refined	.11½	.12	.11½	.12	.11½	.12
600, Pennsylvania flash	.15	.15½	.15	.15½	.15	.15½
*550, E filtered	.17¼	.18	.17¼	.18	.17¼	.18
*600, E filtered	.18½	.19	.18½	.19	.18½	.19
600, E filtered	.16½	.17	.16½	.17	.16½	.17
600, D filtered	.25½	.26	.25½	.26	.25½	.26
550, E filtered	.17½	.18	.17½	.18	.17½	.18
550, D filtered	.21½	.22	.21½	.22	.21½	.22
Pennsylvania Bright Stock	.33	.34	.33	.34	.33½	.35½
†122-124 White Crude Scale Wax	.03	.03¼	.03	.03¼	.03	.03¼
†124-126 White Crude Scale Wax	.03	.03¼	.03	.03¼	.03	.03¼

*At Warren, Pa. †At New York City.

GULF COAST (South Texas)—						
No. 2 color, 100 vis., pale oil	.07	.07½	.07	.07½	.07	.07½
No. 3 color, 200 vis., pale oil	.09½	.10	.09½	.10	.09½	.10
No. 3 color, 300 vis., pale oil	.10½	.11½	.10½	.11½	.10½	.11½
No. 3½ color, 500 vis., pale oil	.12½	.13	.12½	.13	.12½	.13
No. 4 color, 750 vis., pale oil	.15½	.16	.15½	.16	.15½	.16
No. 5 to 6 color, 200 vis., red oil	.08	.08½	.08	.08½	.08	.08½
No. 5 to 6 color, 300 vis., red oil	.09½	.10	.09½	.10	.09½	.10
No. 5 to 6 color, 500 vis., red oil	.10½	.11	.10½	.11	.10½	.11
No. 5 to 6 color, 750 vis., red oil	.13½	.14	.13½	.14	.13½	.14
No. 2 color, 200 vis., pale filtered	.12¾	.14	.12¾	1.4	.12¾	.14
No. 2 color, 300 vis., pale filtered	.14	.14½	.14	.14½	.14	.14½
No. 2½ color, 500 vis., pale filtered	.15½	.16½	.15½	.16½	.15½	.16½
No. 2½ color, 750 vis., pale filtered	.20	.20½	.20	.20½	.20	.20½
CALIFORNIA—						
130 vis., 2½-3 color	.09	.10	.09	.10	.09	.10
200 vis., 2½-3 color	.10	.10½	.10	.10½	.10	.10½

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

300 vis., 3 -3½ color	.10½	.11	.10½	.11	.10½	.11
350 vis., 3½-4 color	.11	.12	.11	.12	.11	.12
400 vis., 3½-4 color	.13	.14	.13	.14	.13	.14
Red Neutral:						
200 vis., 4½-5 color	.08½	.09	.08½	.09	.08½	.09
300 vis., 5 -6 color	.09	.09½	.09	.09½	.09	.09½
400 vis., 5 -6 color	.11	.11½	.11	.11½	.11	.11½
500 vis., 4½-5 color	.11¼	.12	.11¼	.12	.11¼	.12
500 vis., 5 -6½ color	.11	.11½	.11	.11½	.11	.11½
600 vis., 6 plus color	.12	.12½	.12	.12½	.12	.12½

Note: Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	Oct. 4	Sept. 27	Sept. 20
Gasoline, U. S. Motor, 58-60 437	.08¼	.08¼	.08¼
Kerosene, water white, 41-43	.07½	.07½	.06½
*Fuel Oil, bunker "C," 14-16, per bbl.	1.55	1.65	1.65
*Fuel Oil, Diesel, 28-30, per bbl.	2.10	2.10	2.10
Gas Oil, 28 plus	.05½	.05½	.05½
25 pale Paraffin Oil	.12	.12	.12
28 pale Paraffin Oil	.07¼	.07¼	.07¼
285 red Paraffin Oil	.11½	.11½	.11½
250 red Paraffin Oil	.10½	.10½	.10½
225 red Paraffin Oil	.10	.10	.10
200 red Paraffin Oil	.09½	.09½	.09½
Refined Wax:			
120-122 a.m.p., per lb.	.04	.04	.03⅞
125-127 a.m.p., per lb.	.04¼	.04¼	.04⅛
130-132 a.m.p., per lb.	.04⅜	.04⅜	.04⅜
135-137 a.m.p., per lb.	.05¾	.05¾	.05¾
Petrolatum, in bbls., carload lots, per lb.:			
Dark green	.01⅞	.01⅞	.01⅞
Amber	.03⅜	.03⅜	.03⅜
Extra amber	.03¾	.03¾	.03¾
Cream	.05¾	.05¾	.05¾
Lily white	.07⅜	.07⅜	.07⅜
Snow white	.08¾	.08¾	.08¾

*Lighterage 6.5c a barrel extra.

NEW YORK (BAYONNE) EXPORT PRICES

	Oct. 4	Sept. 27	Sept. 20
Gasoline, U. S. Motor, 58-60 437, in cases	.2440	.2440	.2440
Kerosene, standard white, in cases	.1715	.1665	.1615
Kerosene, water white, in cases	.1815	.1765	.1715
600 steam refined cylinder stock, in bbls.	.16½	.16½	.16½
635 steam refined	.19	.19	.19
650 steam refined	.20	.20	.20
600 Pennsylvania flash	.23	.23	.23
630 Pennsylvania flash	.32	.32	.32
600 Warren E	.25	.25	.25
600 Oil City E	.24½	.24½	.24½
Light 135 Bright Stock	.43	.43	.43
Dark 135 Bright Stock	.41	.41	.41

LOS ANGELES EXPORT PRICES

	Oct. 4		Sept. 27		Sept. 20	
Kerosene, water white	.04¼	.04¾	.04	.04¼	.04	.04¼
U. S. Motor Gasoline, 53-55 437 e.p.	.06¼	.06¾	.06¼	.06¾	.06¼	.06¾

CALIFORNIA CRUDE PRICES

Standard Oil Co.-Union Oil Co. (Effective April 1, 1927)*

Gravity—	Fullerton, Seal Beach, Long Beach, Huntington Beach, Richfield, Rosecrans-Dom'guez, Torrance-Inglewood 1	Whittier, La Habra, Montebello 2	Kern River, Newhall-McKittrick, Midway-Sunset, Elk Hills, Lost Hills, Belridge, Buena Vista Hills 3	Coyote 4	Santa Fe Springs 5	Coalinga 6	Wheeler Ridge 7	Santa Maria, Ventura, Orcutt, Salt Lake 8
14°	.85	.85	.75	.85	....	.75	.75	.85
15°	.85	.85	.75	.85	....	.75	.75	.85
16°	.85	.85	.75	.85	....	.75	.75	.85
17°	.85	.85	.75	.85	....	.75	.75	.85
18°	.85	.85	.75	.85	....	.75	.75	.85
19°	.85	.85	.75	.85	....	.75	.75	.85
20°	.85	.85	.77	.85	....	.76	.76	.85
21°	.86	.85	.79	.86	.85	.77	.77	.85
22°	.87	.85	.81	.87	.85	.78	.78	.85
23°	.88	.85	.83	.88	.85	.79	.79	.85
24°	.89	.85	.85	.89	.85	.80	.80	.85
25°	.90	.86	.87	.90	.86	.81	.81	.86
26°	.92	.87	.89	.91	.87	.82	.82	.87
27°	.94	.88	.91	.92	.88	.85	.83	.88
28°	.96	.89	.93	.93	.89	.87	....	.89
29°	.98	.90	.96	.94	.91	.89	....	.91
30°	1.00	.91	.99	.95	.93	.91	....	.93
31°	1.03	....	1.02	....	.95	.93	....	.95
32°	1.06	....	1.05	....	.97	.95	....	.97
33°	1.09	....	1.08	....	.99	.97	....	.99
34°	1.12	....	1.11	....	1.01	.99	....	1.01
35°	1.15	....	....	....	1.03	1.01	....	1.03
36°	1.18	....	....	....	1.06	....	....	1.06
37°	1.21	....	....	....	1.09	....	....	1.09
38°	1.24	....	....	....	1.12	....	....	1.12
39°	1.27	....	....	....	1.15	....	....	1.15
40°	1.30	....	....	....	....	....	....	....
41°	1.33	....	....	....	....	....	....	....
42°	1.36	....	....	....	....	....	....	....

*Column 1—Long Beach, Seal Beach and Huntington Beach crudes, 14 to 32 degrees, inclusive; Richfield and Fullerton, 14 to 30 degrees; Torrance and Inglewood, 14 to 28 degrees; Dominguez, 24 to 42 degrees. Rosecrans crude ranges from 14 to 42 degrees, but only Union Oil Co. posts below 24 degrees.

Column 2—Whittier crude, 14 to 22 degrees; Montebello, 14 to 30 degrees.

Column 3—Kern River, Newhall and McKittrick, 14 to 19 degrees; Midway-Sunset, Buena Vista and Elk Hills, 14 to 32 degrees; Lost Hills and Belridge, 14 to 34 degrees.

Column 8—Salt Lake, 14 to 19 degrees, inclusive; Santa Maria, 14 to 30 degrees, Ventura and Orcutt, 14 to 39 degrees. Posted only by Union Oil Co.

CRUDE OIL GRAVITY PRICE TABLE

Gravity—	Okla., Kans., N. C. Tex., La.-Ark. 1	Smackover, Ark. 2	Stephens, Ark. 3	Gray County (Texas Panhandle) 4	Crane, Upton, Pecos, Crockett (West Texas) 5	Salt Creek, Wyo. 6	Grade B & Light Crude (G. Coast) 7	Somerset (South Central Texas) 8
Below 24	....	.90	....	....	....	....	....	....
24 and above	....	1.15	....	....	....	....	....	....
Below 25	....	....	....	....	....	....	1.15	....
25 to 25.9	....	....	....	....	....	....	1.17	....
Below 26	....	....	....	....	.80	....	....	....
26 to 26.9	....	....	....	....	.80	....	1.19	....
27 to 27.9	....	....	....	....	.60	....	1.21	....
Below 28	(*)	....	1.00	....	....	....	....	....
28 to 28.9	1.12	....	1.02	.80	.60	....	1.23	....
29 to 29.9	1.14	....	1.04	.82	.60	1.14	1.25	....
30 to 30.9	1.16	....	1.06	.84	60	1.16	1.27	....
31 to 31.9	1.18	....	1.08	.86	.60	1.18	1.29	....
32 to 32.9	1.20	....	1.10	.88	.60	1.20	1.31	1.05
33 to 33.9	1.22	....	....	.90	.60	1.22	1.33	1.07
34 to 34.9	1.24	....	....	.92	.60	1.24	1.35	1.09
35 to 35.9	1.26	....	....	.94	.60	1.26	1.37	1.11
36 to 36.9	1.28	....	....	.96	.60	1.28	....	1.13
37 to 37.9	1.30	....	....	.98	....	1.30	....	1.15
38 to 38.9	1.32	....	....	1.00	....	....	....	1.17
39 to 39.9	1.34	....	....	1.02	....	....	....	....
40 to 40.9	1.36	....	....	1.04	....	....	....	....
41 to 41.9	1.38	....	....	1.06	....	....	....	....
42 to 42.9	1.40	....	....	1.08	....	....	....	....
43 to 43.9	1.42	....	....	1.10	....	....	....	....
44 to 44.9	1.44	....	....	1.12	....	....	....	....
45 to 45.9	1.46	....	....	....	....	....	....	....
46 to 46.9	1.48	....	....	....	....	....	....	....
47 to 47.9	1.50	....	....	....	....	....	....	....
48 to 48.9	1.52	....	....	....	....	....	....	....
49 to 49.9	1.54	....	....	....	....	....	....	....
50 to 50.9	1.56	....	....	....	....	....	....	....
51 to 51.9	**1.58**	....	....	....	....	....	....	....
52 and above	1.60	....	....	....	....	....	....	....

Column 1—Magnolia Petroleum Co. posted new schedule September 14, making price below 30 gravity $1.05 per barrel, with 2 cents increase per degree higher in gravity, taking 30-30.9 gravity at $1.16 as basis, with a top price of $1.60 for 52 and above.

Oklahoma: [Prairie Oil & Gas Co., Sinclair Oil & Gas Co., Gypsy Oil Co., March 12; Carter Oil Co., The Texas Company, March 14.

North Central Texas—[Including Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs (Southwest Texas), Iatan and Panola (Magnolia only), Currie, Nocona, Moran and Corsicana light]: Texas, Prairie, Sinclair and Gulf, March 12; The Texas Company, Humble Oil & Refining Co., March 14.

Kansas—Prairie, Sinclair, March 12; Carter, Texas, March 14.

Arkansas and North Louisiana—[Caddo, Bull Bayou, Crichton, De Soto, Haynesville, Homer and El Dorado only]: Standard Oil Co. of Louisiana, March 14; The Texas Company, March 14; Magnolia Petroleum Co., Pine Island, Haynesville and Bull Bayou, El Dorado, Gulf Pipe Line Co., March 14.

Column 2—On September 17, Louisiana Oil & Refining Co. On September 20, Standard Oil Co. of Louisiana, Magnolia Petroleum Co., Gulf Refining Co., and Atlantic Producing Co. September 23, The Texas Company.

Column 3—Atlantic Oil Producing Co., March 14.

Column 4—Humble Oil & Refining Co. and Gulf Pipe Line Co., March 14. On August 23 Magnolia Petroleum Co. posted flat 75 cents.

Column 5—Humble Oil & Refining Co., August 23; Kay County Gas Co., Magnolia Petroleum Co., and Gulf Pipe Line Co., August 24.

Column 6—Midwest Refining Co., March 12. All crude over 37 gravity, $1.30 per barrel.

Column 7—Humble Oil & Refining Co. and other major buyers (schedule ends "35 and above"), March 14, with exception of Magnolia Petroleum Co., which stops at 31 degrees gravity. Sun Pipe Line Co. posts 2 cents differential for each degree above 35 gravity and $1.47 for 40 gravity and above.

Column 8—Grayburg Pipe Line Co. and Pioneer Oil & Refining Co., April 7.

*Prices for crude below 28 gravity; Oklahoma, Kansas and Texas, Magnolia Petroleum Co., $1.10, March 12; Arkansas, North Louisiana, March 14. Other companies, 2 cents less for each degree, with exception of Humble Oil & Refining Co., which pays $1.12 for crude below 28 degrees gravity.

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NARTH AND EAST CENTRAL TEXAS

*Corsicana heavy (March 14, 1927)....$1.00
Other fields ..... See gravity table

*Posted by Magnolia Petroleum Co.

TEXAS PANHANDLE

*Carson County .....$ .75
*Hutchinson County ..... .75
*Wheeler County ..... .75
Gray County ..... See gravity table

*Humble Oil & Refining Co.
Magnolia Petroleum Co., Gulf Pipe Line Co., and Kay County Gas Co., August 23.

WEST TEXAS

*Iatan (same as North Texas).
Crane-Upton-Crockett.....See gravity table

*Includes Howard County and Westbrook Fields. Kay County Gas Co. pays $1.05 for Howard County crude, effective May 21.

ARKANSAS-NORTH LOUISIANA

Cotton Valley (March 17) $1.00
Bellevue (Feb. 24, 1927) 1.25
Urania (Sept. 15, 1927) ..... .90
East El Dorado (Sept. 20) ..... .90
Other fields..... See gravity table

Note—Cotton Valley and Bellevue, Standard Oil Co. of Louisiana, Gulf Refining Co. and Magnolia Petroleum Co.; Urania, Louisiana Oil Refining Corp.; East El Dorado, Magnolia Petroleum Co., Gulf Refining Co.

GULF COAST

(Goose Creek, Hull, Liberty, West Columbia, Orange, Boling, Sour Lake, Humble, High Island, Pierce Junction and Spindletop.)

‡Grade A (March 14).....$1.20
Grade B ..... See gravity table
*Jennings, La. (March 14)..... 1.05
†Saratoga, Batson, Dayton (March 14, 1927) 1.20
§Markham (March 14) 1.00

*Gulf Pipe Line Co. †Sun Pipe Line Co. ‡Humble Oil & Refining Co. and other major buyers. §The Texas Company.

SOUTH CENTRAL AND SOUTHWESTERN TEXAS

*Luling (May 5) $1.00
†Mirando (March 14) 1.00
Rockdale-Minerva (April 16):
38-38.9 gravity 1.27
39-39.9 gravity 1.29
40 and above 1.31
*Thrall ....
Callihan (May 15) 1.75
Lytton Springs (Lockhart) See gravity table
Somerset ..... See gravity table

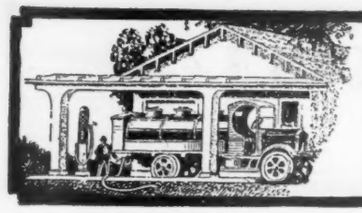
*Posted by Magnolia Petroleum Co. Thrall prices same as north central Texas less 19½ cents per cwt. freight.
†Magnolia Petroleum Co., Humble Oil & Refining Co., Crown Central Pipe Line Co.

ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.
(Effective March 14)

Rock Creek, Wyo. (March 12).....$1.25
Salt Creek ..... See gravity table
Big Muddy (March 12) 1.35
Mule Creek (May 1) 1.10
Grass Creek, heavy ..... .90
Grass Creek, light 1.33
Elk Basin (March 12) 1.33
Lance Creek (March 12) 1.33
Poison Spider 1.00
Notches ..... .65
Rex Lake (February 22) 1.10
Osage 1.33
Lost Soldier (contract) ..... .95
Greybull-Torchlight 1.33
Hamilton Dome ..... .85
Cat Creek (Mont.) 1.33
Sunburst (Mont.) 1.35

(Continued on Page 136)



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns Oct. 4.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline Tank wag'n	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wag'n
Chicago dist. ..	16 0	18 0	2 0	12 0
Decatur, Ill. ...	10 5	12 5	2 0	12 1
E. St. Louis ...	15 1	17 35	2 0	11.2
Joliet	16.4	18.4	2 0	12 3
Peoria	14 2	16.2	2.0	12 1
Quincy	16 2	18 2	2 0	11.9
Davenport, Ia..	17 5	19.5	3 0	12 3
Des Moines ...	13.9	15 9	3.0	12 3
Keokuk	17 5	19 5	3 0	12.3
Sioux City	17 1	19.1	3 0	11 9
Duluth, Minn...	15 5	17 5	2 0	12.9
Minneapolis ...	14 0	14 0	2 0	12 9
Mankato ...	17.1	19 1	2 0	12 7
LaCross, Wis. .	17 2	19 2	2.0	13 0
Milwaukee	16.1	18 1	2 0	11 9
Madison	16 3	18 3	2 0	12 1
Detroit, Mich. .	17 8	19 8	3 0	13 7
Grand Rapids .	14 0	16 0	3 0	13 6
Saginaw	17 9	19.9	3 0	13 8
Evansville, Ind.	17 0	19.0	3 0	13 0
Ft. Wayne	14 0	14.0	3 0	13 4
Indianapolis ...	15 2	15 2	3.0	12 2
South Bend	15 0	15 0	3 0	13 4
Fargo, N. D. ..	17 0	19.0	2 0	14 9
Huron, S. D. ..	19 5	21.5	4 0	13 9
Sioux Falls ...	15 0	17.0	4 0	13 4
*K. C., Mo. ...	14 9	16.9	3 0	10.6
*Springfield ...	16 8	18 8	3 0	11.5
*St. Louis	15 6	17 9	2 5	11.3
*St. Joseph ...	14 5	16 5	3 0	11.2
Wichita, Kans.	14 8	16.8	2 0	10 8
Bartlesville, Ok.	15.8	17 8	3.0	10 8

NAPHTHAS

	Tank wagon	Tank car
Oleum spirits	16.0	10 75
V. M. & P. naphtha	18.0	12 75
Cleaner's naphtha	18 0	13 75
Stanisol	19.0	14 75

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

STANDOLIND FURNACE OIL

Less than 100 gallons	9 0
100 to 799 gallons	8 0
800 or more gallons	7.5

Tank wagon prices of gasoline subject to discount of 1 cent a gallon on dumps of 50 gallons or more throughout territory except Chicago district where discount applies only to dumps of 100 gallons. Kerosene subject to 1 cent discount on dumps of 50 gallons or more.

Outside the Chicago district, the following quantity discount schedule is in effect on monthly tank wagon deliveries of gasoline: 6,000 gallons or more, 1½ cents; 10,000 gallons or more, 2 cents; 15,000 gallons or more, 3 cents. These discounts include the 1 cent allowed on dumps of 50 gallons or more at one delivery.

Within the Chicago district, the following quantity discount schedule is in effect on tank wagon deliveries of gasoline: 750 to 2,000 gallons, one-half cent; 2,000 to 3,000 gallons, three-fourths cent; 3,000 to 6,000 gallons, 1 cent; 6,000 to 10,000 gallons, 1½ cents; 10,000 to 15,000 gallons, 2 cents; 15,000 gallons or more, 3 cents. These discounts are in addition to the special discount of 1 cent on dumps of 100 gallons or more at one delivery.

If the quantity bought during the year is equal to or exceeds 12 times the agreed monthly quantity, the discount is paid or credited on the entire quantity at the close of the term less the monthly payments made during the year.

*State tax 2 cents; remainder city tax.

OHIO

Standard Oil Co. (Ohio)

	Gasoline Tank wag'n	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wag'n
All Ohio points	17 0	19 0	3 0	14.5

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.*

	Gasoline Tank wag'n	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wag'n
Dallas, Tex. ...	14 0	17 0	3 0	11.0
Fort Worth ...	14 0	16 0	3.0	10 0
Houston	13.0	15.0	3.0	15.0
San Antonio ..	13.0	15.0	3.0	10.0
El Paso	15.0	17.0	3.0	16.0
Texarkana	15 0	18.0	3 0	12.0
Muskogee, Ok. .	15 0	18 0	3 0	9 0
Okla. City	13.0	14.0	3.0	9.0
Tulsa ..	15.0	18.0	3.0	9 0
Ft. Smith, Ark.	16 0	19 0	5.0	12 0
Little Rock ...	15.0	18.0	5.0	12.0

*The following is the schedule of discounts on quantity gasoline sales adopted by the Magnolia Petroleum Co. in Oklahoma: Over 750 gallons a month, one-half cent; over 2,000 gallons, three-quarters cent; over 3,000 gallons, 1 cent; over 4,500 gallons, 1¼ cents; over 6,000 gallons, 1½ cents; over 8,000 gallons, 1¾ cents; over 10,000 gallons, 2 cents. If the quantity bought during the year is 12 times the monthly agreed purchases, the discount will be paid or credited on the entire quantity for the year less any monthly purchases.

The schedule on service station deliveries is: Over 200 gallons a month, 1 cent; over 300 gallons a month, 1¼ cents; over 400 gallons, 1½ cents; over 500 gallons a month, 1¾ cents; over 600 gallons, 2 cents. The same rule applies for annual purchases in the tank wagon discounts.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline Tank wag'n	Gasoline Service sta ion	Gasoline Incids tax of	Kero. Tank wag'n
*N. Orleans, La.	14.5	18.5	3.0	14.0
Baton Rouge ..	14.0	17.0	2.0	12.5
Alexandria	15.0	18.0	2.0	14.0
LaFayette	15.0	18.0	2.0	13.5
Lake Charles .	15 5	18 5	2 0	14 0
Shreveport	15.5	18.5	2.0	13.0
Kn'xville, T'nn.	19.5	22.5	3.0	15.0
Memphis	15.0	18.0	3.0	14.0
Chattanooga ..	19.5	22.5	3.0	15.0
Nashville	18.0	21.0	3.0	15.0
Bristol	19.0	22.0	3.0	14.0
Lit. Rock, Ark.	18.0	21.0	5.0	12.0

*Tax of 3 cents includes city tax of 1 cent.
*Louisiana kerosene prices include 1-cent state tax and 1-cent parish tax.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline Tank wag'n	Gasoline Service sta ion	Gasoline Incids tax of	Kero. Tank wag'n
Atlanta, Ga. ...	16.0	18.0	4.0	15.5
Augusta	19.0	22.0	4.0	16.5
Macon	19.0	*22.0	4.0	16.5
Savannah	16.0	18.0	4.0	14.5
B'rm'h'm, Ala..	18.0	21.0	4.0	15.5
Mobile	17.0	20.0	4.0	15.0
Montgomery ...	19.0	22.0	5.0	16.5
Clarks'le, Miss..	17.0	20.0	4.0	12.5
Jackson	17.0	20.0	4.0	13.5
Natchez	16.5	19.5	4.0	14.0
Gulfport	18.5	21.5	6.0	14.0
Vicksburg	16.5	19.5	4.0	14.0
Jack'ville, Fla..	18 0	21.0	5.0	14 0
Miami	20 0	23.0	5 0	15.5
Pensacola ...	19 0	22 0	5 0	15 0
Tampa	17 0	20 0	5.0	14 0
Lexington, Ky..	18.0	21.0	5.0	15.5
Covington, Ky..	19.0	22.0	5.0	15.5
Louisville	19.0	22.0	5.0	15.0

In addition to the state tax of 2 cents on gasoline, Montgomery has city tax of 1 cent on gasoline. Kerosene prices in Georgia includes 1 cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene only. Pensacola tax includes 1 cent city levy. Gulfport tax includes privilege tax of 2 cents in addition to sta.e tax.

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refin'ng Co.

	Gasoline Tank wag'n	Gasoline Service sta ion	Gasoline Incids tax of	Kero. Tank wag'n
Pittsburgh, Pa..	16.0	*22.0	...	14.0
Philadelphia ..	14.0	17.0	...	14.0
Scranton	16.0	*22.0	...	14.0
Allentown	16.0	*22.0	...	14.0
Altoona	16.0	*22.0	...	14.0
Erie	14.0	*18.0	...	14.0
Dover, Del. ...	19.0	22.0	3.0	14.0
Wilmington ...	19.0	22.0	3.0	14.0
Spring'd, Mass.	17.0	17.0	...	15.0
Worchester ...	17.0	17.0	...	15.0
Boston	17.0	17.0	...	15.0
Providence, R.I.	19.0	19.0	2.0	15.0
Hartford, Conn.	21.0	22.0	2.0	15.0
New Haven ...	21.0	22.0	2.0	15.0

*Includes tax of 3.0 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the state.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline Tank wag'n	Gasoline Service sta.ion	Gasoline Incids tax of	Kero. Tank wag'n
Albany, N. Y. .	17.0	19.0	...	15.0
*New York ...	17.0	19.0	...	15.0
Buffalo	17.0	19.0	...	14.0
Rochester	13.0	16.0	...	14.0
Syracuse	17.0	19.0	...	15.0
Boston, Mass..	17.0	19.0	...	15.0
Augusta, Me. ..	20.0	22.0	3.0	15.0
M nch't'r, N.H..	18.0	22.0	3.0	15.0
Burlington, Vt..	20.0	22.0	3.0	15.0

*Price in steel barrels.

PACIFIC COAST DISTRICT

Standard Oil Co. (California)

	Gasoline Tank wag'n	Gasoline Service sta.ion	Gasoline Incids tax of	Kero. Tank wag'n
San Francisco .	17.0	21.0	3.0	15.5
Pueblo	18.0	18.0	3.0	15.5
Los Angeles ...	16.5	20.5	3.0	15.5
Reno, Nev. ...	22.0	26.0	4.0	19.0
Portland, Ore. .	17.5	21.5	3.0	16.5
Sea tle, Wash..	16.5	20.5	2.0	16.5
Tacoma	16.5	20.5	2.0	16.5
Spokane	20.5	24.5	2.0	20.5
Phoenix, Ariz...	22.0	26.0	3.0	20.5

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline Tank wag'n	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wag'n
Atlantic City ..	18.0	20.0	2.0	14.0
Newark, N. J. .	18.0	20.0	2.0	14.0
Annapolis, Md..	20.0	23.0	4.0	12.0
Balt more	20.0	23.0	4.0	10.0
Cumberland ...	20.0	23.0	4.0	14.0
Washington ...	18.0	21.0	2.0	12.0
Danville, Va. ...	20.5	. . .	4.5	14.0
Norfolk	20 5	23.5	4 5	12 0
P.tersburg	20.5	23 5	4.5	14.0
Roanoke	20 5	23 5	4 5	14 0
Richmond	18.5	21.5	4.5	14.0
Ch'rist'n, W.Va.	20 0	23.0	4.0	14.0
Keyser	20.0	....	4.0	14.0
Parkersburg ...	17.0	20.0	4.0	14.0
Wheeling	20.0	23.0	4.0	14.0
Charlotte, N. C.	20.0	23.0	4.0	14 0
Hickory	20.0	23.0	4.0	14 0
Mt. Airy	20.0	23.0	4.0	14.0
Salisbury	20.0	23.0	4.0	14 0
Charl'stn, S. C.	20.0	23.0	5.0	14.0
Columbia	20.0	20.0	5.0	14.0

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline Tank wag'n	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wag'n
Omaha	14.25	16 25	2.0	12.25
McCook	14.75	14.75	2.0	11.50
Norfolk	16 75	18 75	2 0	12 75
N. Platte	17.75	19.75	2.0	13.50
Scottsbluff	17.25	19.25	2.0	13 00

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline Tank wag'n	Gasoline S rvice station	Gasoline Incids tax of	Kero. Tank wag'n
Denver, Colo. ..	16.0	18 0	3 0	12 5
Pueblo	17 0	19 0	3 0	14.5
Grand Jnctn. ..	20.5	22 5	3.0	18 0
Casper, Wyo. ..	17.0	19 0	3 0	13 0
Cheyenne	18 0	20 0	3 0	14 0
Butte, Mont. ..	22.0	22.0	3.0	19 0
Helena	22.5	24.5	3.0	19 0
Salt Lake, Utah	21.0	23.0	3.5	17.0
Boise, Idaho ..	23.5	25.5	4.0	19 0
Twin Falls ..	23.5	25.5	4.0	19 0
Al.u'que, N. M.	21.0	24.0	5.0	17.0

TANK WAGON CHANGES

September 27—Standard Oil Co. of Kentucky increased the gasoline tank wagon and station prices 3 cents in Florida.

September 28—Continental Oil Co. reduced the gasoline tank wagon and station prices 1 cent throughout practically all of Colorado and Wyoming.

September 29—Standard Oil Co. of Indiana increased the gasoline tank wagon and station prices 2.2 cents and 4.2 cents respectively, in Peoria, Ill., making the new prices 14.2 cents and 16.2 cents. The same company decreased the gasoline tank wagon and station prices 1.5 cents in Grand Rapids, Mich., making the new prices 14.0 cents and 16.0 cents.

September 30—Standard Oil Co. of Indiana reduced the gasoline tank wagon and station prices 3.1 cents in Des Moines, Iowa, making the new prices 13.9 cents and 15.9 cents respectively.

October 1—Standard Oil Co. of Ohio reduced the gasoline tank wagon and station prices 2 cents throughout Ohio.

September 24—Magnolia Petroleum reduced gasoline tank wagon and service station prices 1 cent and kerosene tank wagon price 1 cent at San Antonio. Same company reduced gasoline tank wagon 1 cent and service station price 3 cents at Oklahoma City, Okla.

September 26—Magnolia Petroleum Co. reduced gasoline tank wagon and service station price 1 cent at El Paso, Tex.

September 27—Magnolia Petroleum Co. reduced gasoline tank wagon 1 cent and service station 2 cents at Houston, Tex.

October 1—Magnolia Petroleum Co. reduced gasoline tank wagon price 1 cent at Oklahoma City, Okla.

BAKU-BATUM PIPE LINE

Oil pipes for the Azneft line from Baku to Batum have been ordered abroad on account of the preoccupation of Russian plants with orders for the Grozneft trust, and the necessity for prompt completion of the line. At the same time a kerosene refining plnat is to be built with a capacity of 50,000,000 poods (1 pood equals 36.1128 pounds), this to be one of a series of plants with a total capacity of 150,000,000 poods annually. The first plant is necessary before completion of the Baku-Batum line as it will facilitate the shipment of oil products.

CALIFORNIA MARKETS PRACTICALLY UNCHANGED

LOS ANGELES, Calif., Sept. 30.—There has been practically no change in the California oil market. Local consumption of motor gasoline is holding up very well. The so-called bootleg situation is not quite as well controlled as two or three weeks ago but has not broken very badly yet, and it is expected some stations now underselling will get back into line before long.

One large refining company has been contracting for natural gasoline over a period of three years or longer and there is practically no natural gasoline available for export. Prices have strengthened somewhat. Natural gasoline is now bringing around 8½ cents where two weeks ago it was as low as 7 cents. It is very possible this situation is temporary and the price will again weaken.

According to Bureau of Mines figures, stocks of natural gasoline at the end of August amounted to 748,692 bbls., approximately 27 days' supply at the rate of consumption during that month. This is the largest stock of natural gasoline on hand in California for over three years. By far the biggest portion is held by refinery operators and not by natural gasoline manufacturers. Production continued to increase during August. Export kerosene has strengthened fractionally.

CRUDE OIL PRICES

(Continued from Page 135)

Artesia (March 12)	1.00
Hogback (N. Mex.) (March 14)	1.38

Note: Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies post Grass Creek light and Elk Basin.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective August 1)

Penna Grade Oil in New York Transit Line (New York)	$2.65
Bradford District Oil in National Transit Lines (Pennsylvania)	2.65
Penna Grade Oil in National Transit Lines (Pennsylvania)	2.55
Penna Grade Oil in Southwest Pennsylvania Lines (West Virginia)	2.55
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	2.50
Penna Grade Oil in Buckeye Pipe Line lines (Ohio) (August 23)	2.25
Cabell Grade Oil in Eureka Pipe Line lines (West Virginia) (March 16) ...	1.40
Corning 35-cent grade oil in Buckeye Pipe Line Co.'s line (March 17)	1.35
Corning 25-cent grade oil in Buckeye Pipe Line Co.'s lines (March 17)	1.45
Somerset Oil in Cumberland Pipe Line lines (Kentucky) (March 16)	1.50
Ragland Grade Oil in Cumberland Pipe Line lines (Kentucky)	.95
Keister (Pennsylvania)	1.10

MIDDLE WESTERN STATES

Ohio Oil Co.
(Effective March 14)

Lima	$1.71
Wooster	1.57
**Saginaw, Mich., Saginaw Sand (May 27)	2.05
Illinois	1.40
Indiana	1.48
Princeton	1.40
Plymouth	1.32
Waterloo (Nov. 17, 1926)	1.35
*Western Kentucky	1.33
**Saginaw, Mich., Berea Sand (May 27)	1.95
†Cumberland, Barren, Clinton and Monroe Counties, Kentucky (March 16)..	1.50
‡Oil in lines of Stoll Oil Refining Co. in Oil City, Ky. (March 16, 1927)	1.50
†Clay County, Tennessee (Nov. 16) ...	2.35
§Oil Springs (Canada)	2.18
§Petrolia (Canada)	2.11

*Posted by Ohio Oil Co.
†Posted by Paragon Development Co.
‡Posted by Stoll Oil Refining Co.
§ osted by Imperial Oil Co., Ltd.
**Posted by Sun Oil Co.

MEXICAN CRUDE

Note—Due to the fact that the exportation of Tuxpam light crude oil has become a negligible factor, prices will no longer be published.

*Panuco heavy (f.o.b. Mex. ports)	$1.15

*17.496 cents tax.

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Oil Securities in Trading Market

Three Exceptions, Two Interested in Gas. Transcontinental and Yates Field Proration Figure in Movement

Oil securities during the past week presented another trading market exclusively with three exceptions. Producers & Refiners Corp. was very active and advanced sharply to 31⅝ which was within $2 of its high for the year. There was a good volume of trading in PFN necessary to send it to this figure. The only reason advanced for the strength of Producers & Refiners was the gas line from Amarillo to Denver in which the company is interested.

The other issue which was strong was Houston Oil, the football of the oil group. This security was heavy during the first part of the week, but displayed resistance, and mounted to 166¾ on Monday when a good buying power was in evidence. The company's gas interests in the south Texas fields have offered the only solution for this issue's performance, as it has been very inactive in the oils except for the Seminole Field where it has some flush production in partnership with the Roxana Petroleum Corp. and the Atlantic Oil Producing Co.

Both of the securities which were strong were gas stocks.

Transcontinental Oil common slumped almost $2 on one day during the week when a volume of 60,000 shares were thrown on the market. The stock was not supported, and declined to 6⅜, closing at 7⅞. This is believed to have been caused by the proration agreement in the Yates Pool of Pecos County, Texas where the company has an extensive block of acreage with the Mid-Kansas Oil & Gas Co., a subsidiary of the Ohio Oil Co. Looking at the Yates problem in a broad view, the proration agreement will do no damage to the earnings of the owners, but will rather improve their prospects. The Transcontinental and Mid-Kansas block of leases is so large that it is amply protected from any drainage troubles which are encountered in fields where smaller parcels of leases are held. Regardless of how the offset wells are handled in the Yates Pool, it seems improbable that the Transcontinental and Mid-Kansas earnings will be injured.

Imperial Oil

The Sun Life Assurance Co. of Montreal, Canada, purchased from the Standard Oil Co. of New Jersey 84,876 shares of stock of Imperial Oil, Ltd., for $55 a share, according to an announcement by T. P. McCauley, president of the Assurance company, which was later confirmed by the Standard Oil Co. of New Jersey. This transaction put upon the shares of the company an apparent valuation about $10 a share higher than the open market price quoted on the New York Curb a month ago and about $10 a share below the present price prevailing, the stock having advanced about $20 a share within the last month.

The transaction, which reduces Standard's holdings of Imperial Oil stock to 4,700,000 shares of an outstanding number of 6,458,267 shares, is especially interesting, in as much as at $55 a share, based on the current dividend rate, the yield of the stock is in the neighborhood of 2.73 per cent, which is admittedly a low yield for a stock, lower than many gilt-edged bonds.

The inference has been in some quarters not official that the company's dividend would be increased in the near future.

The Imperial Oil Co. is in an exceptionally strong position and although doubtless affected by low prices, earnings are believed to justify larger dividends as soon as the oil outlook clears. The next dividend meeting of Imperial Oil is scheduled for November and although officials of the company have indicated no increase disbursements may be expected, action will probably depend upon conditions in the oil business.

The fact of the Sun Life buying Imperial Oil stock at this time was regarded as significant. Life companies are usually impeded by caution in making investments, and it is believed the purchase of Imperial Oil stock stands as definite proof of the opinion among the leading executives that the present condition of the oil industry is only temporary. Such a transaction cannot be viewed in any other light, than as indicating faith in the immediate outlook.

Pan American Petroleum

The report of the Pan American Petroleum & Transport Co. and its owned and controlled companies, including Lago Oil & Transport Corp., for the six months ended June 30, 1927, shows consolidated net profit of $10,816,200 after interest, depreciation, deplet on, federal taxes, etc., equivalent to $3.23 a share (par $50), earned on 3,362,253 combined shares of common and Class B stock. In the first half of 1926, excluding Lago Oil & Transport Corp., net profit was $15,335,616, of $5.56 a share, on the average amount of stock outstanding during the period.

The consolidated income account of the Pan American Petroleum & Transport Co. and its owned and controlled companies, for the six months ended June 30, 1927, compares with the same period of 1926 as follows:

	1927	†1926
Operating profit	$19,833,563	$23,870,915
Int. & amortization	*117,820	256,900
Depre. & Deplet'n	7,209,849	6,591,345
Federal taxes	1,616,000	2,435,000
Minority int. in propr. cos.	264,334	253,054
Net profit	$10,861,200	$15,335,616

†Excludes Lago Oil & Transport.
*Credit.

Mexican Petroleum

The report of the Mexican Petroleum Co., Ltd., of Delaware and its owned companies, for the six months ended June 30, 1927, shows net profit of $9,389,252 after depreciation, depletion, federal taxes, etc., equivalent after allowing for dividend requirements on the 8 per cent preferred stock, to $19.48 a share earned on 457,300 shares of common stock. This compares with $14,020,326. or $29.60 a share, in the first six months of 1926.

The consolidated income account of the Mexican Petroleum Co., Ltd., of Delaware and owned companies for the six months ended June 30, 1927, compares with the same period of 1926 as follows:

	1927	1926
Operat'g profit	$14,148,920	$19,941,886
Int & amort. charges (credit)	908,848	196,296
Total	$15,057,768	$20,138,182
Depre. & Depl.	4,268,516	3,927,778
Federal taxes	1,400,000	2,190,000
Net profit	$ 9,389,252	$14,020,326

Lago Oil & Transport

The report of the Lago Oil & Transport Corp. and subsidiaries, for the six months ended June 30, 1927, shows net profit of $2,251,672, after depreciation, depletion, taxes, etc., equivalent to 56 cents a share earned on 3,990,578 on par shares of stock. This compares with $2,237,613, or 56 cents a share, on 3,968,771 shares in the first six months of 1926.

The consolidated income account for the six months ended June 30, 1927, compares with the same period of 1926 as follows:

	1927	1926
Operating profit	$3,806,565	$2,932,630
Depr. and deptn.	1,343,848	672,773
Balance	$2,462,717	$2,259,857
Other income	15,607	160,072
Total income	$2,478,324	$2,419,929
Taxes	216,000	160,000
Minority int. in propriet. cos.	10,652	22,316
Net profit	$2,251,672	$2,237,613

Transcontinental Oil

Holders of Transcontinental Oil Co. stock, who hoped the company would show big earnings as a result of the development of the Pecos County Field, have been disappointed by the restriction of output in that pool. It is stated that this restriction is enabling other companies to have time to drill offsets to the property and that as many of these offsets have been productive, the ultimate yield on the Ohio Oil-Transcontinental property may be less than would otherwise be the case. If the Ohio Oil-Transcontinental property were being developed to its full extent and all oil marketed, the earnings of both companies would be benefited, traders believe.

Tide Water Associated passed its dividend, but the issue remained firm at 17.

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

Stocks—	Par	Clos. quot. Oct. 3	Clos. quot. Sept. 26	1927 High	1927 Low	1926 High	1926 Low	1925 High	1925 Low
Amerada Corp.	..	30⅝	31	37½	27¾	32⅞	24⅝	...	...
Atlantic Refining, com.	100	120	120¼	128½	107	128⅝	97	117½	95½
Barnsdall "A"	25	22½	22½	35½	20¾	32½	23½	34½	23⅞
California Petroleum, com.	25	21⅞	21¾	32⅞	21½	38⅛	30⅜	34⅝	23⅞
Houston Oil	100	163¾	148¼	170¼	60½	70	50¼	80	50
Independent Oil & Gas	..	21	20⅝	32⅝	17⅝	34	20¼	41⅜	13½
Louisiana Oil	10	11	10⅜	18½	10⅜	19⅝	12	23⅝	10¾
Maracaibo	..	13	13½	22⅝	13½	27⅝	18⅝	35⅞	20⅝
Mariand	..	35	35¼	58½	31	63⅜	41¼	60⅛	31⅝
Mid-Continent Petroleum	..	29	29	39⅜	29	41	25⅞	38	25¼
National Supply	50	86	84½	95⅜	76	84⅞	55½	71	54¾
Oil Well Supply	25	40¼	35¼	44⅜	31¼	36	30	38	33⅜
Pan American, B	50	50⅜	50⅜	66⅜	45⅛	72⅝	56⅛	83⅜	59½
Pan American, Western B	..	19	19⅜	37⅞	19	46	34	94⅞	37¼
Phillips Petroleum	..	41⅜	42⅜	60¼	42⅛	54⅞	42⅛	47⅛	34¼
Producers & Refiners	50	29⅝	29⅝	33⅞	16⅜	26	11	32⅝	12½
Pure Oil, com.	..	26½	26⅛	33½	26	31	25⅜	33⅜	22½
Royal Dutch, N. Y., sh.	13.40	46	46¼	54½	46	57⅞	49⅞	57⅞	40¼
Shell Transport	10	41½	43⅜	49	41½	48⅜	42	49	30¾
Shell Union, com.	..	25⅛	25⅛	31⅜	25⅛	30⅞	24	28⅜	21⅝
Simms Petroleum	10	17	17½	22⅜	14½	25⅝	16½	28½	18⅜
Sinclair Consolidated	..	16⅜	17½	22⅞	16½	24⅞	16¾	24⅜	17
Skelly Oil	25	26¼	26⅞	37⅝	24¼	37⅛	27	32½	21¾
Standard of California	25	52⅝	53⅞	60⅜	50⅜	63⅜	54	67¼	52½
Standard of New Jersey, com.	25	40½	39⅝	41⅜	35⅞	46⅞	37½	47½	30⅝
Standard of New York	25	31⅜	31½	34½	29⅜	47¼	30⅜	48⅜	40
Sun Oil Co.	..	32	31¼	34⅞	30	41⅜	30⅛	43⅜	38½
The Texas Company	25	51¼	51½	58	45	58	43⅝	55	43¾
Texas Pacific Coal & Oil	10	14½	14½	18⅞	12	10½	12⅛	24⅜	11
Tide Water Associated Oil	..	17	17	23½	15½	21	17	...	...
Transcontinental	..	7¼	7½	8⅝	3⅝	5½	3	5⅝	3½
Union Oil of California	25	42	42⅜	56½	39⅞	53⅞	37¼	43⅞	38½
Union Tank, com.	100	111	112	115	95	120⅜	84¾	134	118
White Eagle Oil & Refining	..	22¼	23	27½	22	29⅜	25	21¾	25⅝
Standard Oils									
Anglo-American Oil	£1	18⅜	18⅜	21⅝	18⅜	19¾	16½	26¾	17½
Borne Scrymser	25	56	56	69	49½	75	65	‡240	203
Buckeye Pipe Line	50	56½	57	58	45	59½	42	72	63½
Chesebrough Manufacturing Co.	25	108	107	108	76½	81¼	63	74	99¼
Continental	10	17⅛	18	22⅝	16⅝	25⅛	10¾	21¼	2.⅞
Cumberland Pipe Line	100	90	90	‡137	90	137	102	156	128
Eureka Pipe Line	100	61	56	61	47	53⅜	40	96	61¼
Galena Signal, com.	100	7⅝	7⅜	13½	7½	32½	9⅞	68¼	23½
Humble Oil & Refining Co.	25	64	64¼	64¼	54	99⅞	52	99	40½
Illinois Pipe Line	100	162½	162	164⅝	123⅜	144	131	154½	124
Imperial Oil	..	60	61	61	37⅜	39⅜	32½	39¼	27¼
Indiana Pipe Line	50	77	78½	77	61	68	52¼	84	8.½
International Petroleum Co.	10	32⅜	33⅛	34⅞	28½	35¼	28⅜	25⅝	20½
National Transit Co.	12.50	16⅛	16	17½	13⅝	30¾	27¼	25½	16½
New York Transit	100	34	34	36	31¼	61½	27¼	70	50
Northern Pipe Line	100	82½	82	88	70	80½	64	88	67½
Ohio Oil Co.	25	60⅝	60¼	64¼	52	67⅜	55⅜	75¼	60
Penn-Mex Fuel	25	24⅝	23⅞	31	12	24¼	15	44	19
Prairie Oil & Gas	25	51¼	52	55½	45⅝	60¼	49	65½	45⅞
Prairie Pipe Line	100	182	183½	185	132	137½	122½	129¾	105
Solar Refining Co.	100	181	180	‡201½	178	212	154½	150	200
South Penn Oil	25	37	37½	37⅞	21½	50	30	‡197	139
Southwest Pa. Line	100	70	71	77	55½	56	47½	84	50
Southern Pipe Line	50	21½	21	‡27⅛	18½	27	24	‡103	63
Standard of Indiana	25	73⅜	73⅝	74¼	64¼	70½	60½	70⅜	69¼
Standard of Kansas	25	16⅜	17¼	20⅞	15⅜	36½	16¼	46	30
Standard of Kentucky	25	121½	122½	123½	111⅝	134⅜	108	137	114⅝
Standard of Nebraska	25	44½	44½	49⅛	45	51⅛	42	‡270	231
Standard of Ohio, com.	100	78¾	76	‡354	294	362	192½	369	338
Swan & Finch, com.	25	17	16½	17	15	21	18	27	12
Vacuum Oil	25	127½	128	134	95½	109⅜	94½	109½	80½
Miscellaneous									
Gulf Oil Corp. of Pa.	25	92¾	93	96½	86⅛	95	82½	98⅛	63½

*Bid, no sales. ‡Old stock. †New stock.
Quotations furnished by W. J. Wollman & Co.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange was as follows:

Oct. 3	60.97	Aug. 29	60.41	July 25	60.55
Sept. 26	61.30	Aug. 22	61.58	July 18	60.36
Sept. 19	60.83	Aug. 15	61.05	July 11	59.36
Sept. 12	61.20	Aug. 8	61.33	July 2	58.99
Sept. 5	60.60	Aug. 1	60.38	June 27	58.99

MEXICAN OIL REVENUE SHOWS BIG DECREASE

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Oct. 1.—The policy of the Mexican government in dealing with oil properties is making a very bad showing for the financial affairs of the country. When the Mexican congress opened a deficit was shown for 1926 and 1927, and President Calles proposed plans for balancing the budget in 1928.

The deficit for 1926 amounted to about $2,863,998 and during the first six months of 1927 it is expected this deficit will indicate an increase that for the entire calendar year 1927 of something like $11.000,000.

The government of Mexico, at a time when oil was selling at a good price and when prospects for oil recovery in Mexico were very alluring, began its tightening processes against oil companies. Now the oil commanding a low price in the market it looks as if the Mexican government had almost killed the goose that was laying the golden eggs.

The program of Mexico for public works to be paid from revenues coming largely from petroleum will have to be curtailed. In the meantime the government is calling for advice from bankers and it is within reason to expect that a more sound economic basis for dealing with oil companies may be agreed upon.

SEPTEMBER HAD FEWER OIL WELLS COMPLETED

(Continued from Page 33)

Carter	6	26	32
Creek	26	59	85
Garfield	1	20	21
Grady	5	45	50
Hughes	4	9	13
Kay	2	30	32
Logan	1	20	21
Muskogee and Wagoner	3	30	33
Okfuskee	14	27	41
Okmulgee	12	24	36
Osage	8	35	43
Pawnee	2	8	10
Payne and Lincoln	2	19	21
Ponto.oc and Garvin	9	34	43
Pottawatomie	14	69	83
Seminole	26	454	480
Stephens and Cotton	1	26	27
Miscellaneous	4	69	73
Total September	142	1,009	1,151
Total August	183	972	1,155
Difference	41	37	4

KANSAS FIELDS
Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	7	215	4	0
Cowley	10	230	6	1
Chautauqua and Elk	5	15	1	3
Greenwood	28	2,042	8	1
Sumner	13	2,892	3	0
Miscellaneous	15	55	13	0
Total September	78	5,449	25	5
Total Augus.	55	3,135	32	4
Difference	23	2,314	7	1

Summary of Rigs and Wells Drilling

County—	Rigs	Drg.	Ttl.
Butler	7	13	20
Chautauqua and Elk	3	6	9
Cowley	8	22	30
Greenwood	12	18	30
Marion	2	8	10
Sumner	17	30	47
Miscellaneous	8	76	84
Total September	57	173	230
Total August	52	194	246
Difference	5	21	16

NORTH LOUISIANA
Summary of Field Operations

Parish—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Bossier	9	22	2	4	7	14	21
Caddo	18	*1,962	6	7	11	39	50
Claiborne	0	0	0	0	0	1	1
DeSoto	5	10	4	0	1	5	6
Grant	2	35	1	0	2	0	2
LaSalle	4	275	0	0	1	3	4
Monroe Dist.	9	†	4	5	8	8	16
Red River	0	0	0	0	1	2	3
Richland	3	†	0	3	3	10	13
Sabine	2	1,600	1	0	4	10	14
Webster	4	50	1	2	2	9	11
Winn	1	0	1	0	1	3	4
Miscl.	9	0	9	0	1	6	7
Total Sept.	66	3,954	29	21	42	110	152
Total Aug.	59	6,758	27	13	42	103	145
Difference	7	2,804	2	8	0	7	7

*Two wells also producing gas. †105,870,000 feet of gas in Monroe district and Richland Parish.

ARKANSAS
Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Union	8	244	3	2	9	19	28
Ouachita	4	80	1	0	1	5	6
Columbia	2	0	2	0	1	1	2
Nevada	6	750	0	0	1	8	9
Miscl.	1	0	1	0	2	4	6
Total Sept.	21	1,074	7	2	14	37	51
Total Aug.	31	1,825	12	4	14	37	51
Difference	10	751	5	2	0	0	0

NORTH CENTRAL AND WEST TEXAS
Summary of Wells Completed
September, 1927
WEST TEXAS

County—	Comp.	Prod.	Dry	Gas
Concho	1	....	1	..
Crane	29	30,608	..	..
Crockett	2	13,524	..	..
Glasscock	1	....	1	..
Garza	1	....	1	..
Howard	2	276	..	..
Jones	3	....	3	..
Kent	1	....	1	..
Mitchell	2	82	1	..
Pecos	7	2,281	2	..
Sterling	1	....	1	..
Stonewall	1	....	1	..
Taylor	2	....	2	..
Tom Green	1	....	1	..
Upton	12	15,497	1	..
Winkler	4	6,401	1	1
Total West Texas	70	68,669	17	1

NORTH CENTRAL TEXAS

County—	Comp.	Prod.	Dry	Gas
Archer	20	333	15	..
Baylor	1	....	1	..
Brown	66	11,342	22	1
Callahan	5	276	3	..
Coleman	6	50	5	..
Clay	2	....	2	..
Comanche	2	....	2	..
Cooke	20	1,788	3	..
Denton	2	....	2	..
Eastland	17	2,551	6	1
Haskell	1	....	1	..
Jack	5	95	3	..
Montague	7	62	2	2
McCulloch	2	....	2	..
Shackelford	7	36	5	..
Stephens	5	35	2	2
Throckmorton	2	180	1	..
Wichita	14	85	9	..
Wilbarger	6	155	4	..
Wise	1	....	1	..
Ycung	26	955	20	..
Total N. C. Texas	217	17,943	111	6
Grand total W. and N. C. Texas, September	287	86,612	128	7
Grand total W. and N. C. Texas, August	307	78,668	136	12
Difference	20	7,944	8	5

WEST TEXAS
Summary of Rigs and Wells Drilling
September, 1927

County—	Rigs	Drlg.	S. D.	Ttl.
Crane	8	27	..	35
Crockett	4	12	4	20
Howard	6	20	4	30
Jones	3	3	5	11
Mitchell	1	3	1	5
Pecos	21	25	8	54
Reagan	4	8	5	17
Upton	5	4	6	15
Winkler	15	25	16	56
Misc. Counties	10	30	36	76
Total	77	157	85	319

NORTH CENTRAL TEXAS

County—	Rigs	Drlg.	S. D.	Ttl.
Archer	2	16	2	20
Brown	13	47	17	77
Callahan	6	18	9	33
Coleman	3	21	12	36
Cooke	11	20	8	39
Eastland	9	16	12	37
Jack	1	11	3	15
Montague	3	8	7	18
Shackelford	1	9	3	13
Stephens	4	6	9	19
Throckmorton	1	6	3	10
Wichita	4	13	1	18
Wilbarger	4	7	9	20
Young	7	30	4	41
Misc. Counties	6	27	34	67
Total	75	255	133	463
Grand total N. C. and W. Texas, September	152	412	218	782
Grand total N. C. and W. Texas, August	174	410	205	789
Difference	22	2	13	7

TEXAS PANHANDLE
Summary of Wells Completed
September, 1927

County—	Comp.	Prod.	Dry	Gas
Carson	4	....	..	4
Cottle	1	....	1	..
Dallam	1	....	1	..
Gray	9	959	..	..
Hutchinson	19	6,650	4	4
King	1	....	1	..
Moore	2	100	..	1
Potter	1	....	..	1
Wheeler	3	....	1	2
Total September	41	7,709	8	12
Total August	47	6,665	13	10
Difference	6	1,044	5	2

Summary of Rigs and Wells Drilling
September, 1927

County—	Rigs	Drlg.	S. D.	Ttl.
Carson	2	1	11	14
Gray	6	9	29	44
Hutchinson	34	4	23	61
Wheeler	6	1	7	14
Misc. Counties	32	4	21	57
Total September	80	19	91	190
Total August	98	22	103	223
Difference	18	3	12	33

SOUTHWEST TEXAS FIELDS
Summary of Field Operations

	Com.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Mirando	19	215	11	3	9	22	31
Rockdale-							
Minerva	1	35	0	0	1	11	12
Luling	2	45	0	0	.	3	3
Kingsville	1	....	1	0	1	3	4
Refugio	2	....	0	2	0	11	11
Adams Fields	3	....	1	2	1	3	4
Somerset	4	47	0	0	1	0	1
Dale Field	8	3,127	4	0	2	6	8
Miscellaneous	13	60	7	5	8	89	97
Total Sept.	53	3,529	24	12	23	148	171
Total Aug.	56	539	21	10	23	130	153
Difference	3	2,990	3	2	0	18	18

EAST CENTRAL TEXAS
Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Limestone	4	1,575	0	0	6	8	14
Anderson	0	0	0	0	0	3	3
Cherokee	1	0	1	0	0	3	3
Smith	0	0	0	0	0	1	1
Navarro	0	0	0	0	0	3	3
Total Sept.	5	1,575	1	0	6	18	24
Total Aug.	8	0	8	0	1	13	14
Difference	3	1,575	7	0	5	5	10

GULF COAST
Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Austin	2	0	2	0	0	3	3
Brazoria	4	400	3	0	4	8	12
Chambers	1	30	0	0	1	4	5
Fort Bend	8	3,760	1	1	3	16	19
Hardin	8	270	4	0	0	4	4
Harris	6	5,780	2	0	0	18	18
Houston	2	0	2	0	0	0	0
Jefferson	7	5,544	2	0	8	27	35
Liberty	5	2,340	0	0	4	8	12
Matagorda	1	0	1	0	0	3	3
Orange	1	525	0	0	0	7	7
Walker	0	0	0	0	0	2	2
Waller	0	0	0	0	0	2	2
Wharton	7	310	3	0	0	0	0
Miscl. Counties	1	0	1	0	1	5	6
Acadia Parish.	3	270	0	0	1	4	5
Calcasieu	8	6,015	1	0	4	16	20
Cameron	1	0	1	0	0	7	7
Evangeline	1	25	0	0	0	0	0
Iberia	1	0	1	0	0	2	2
Miscl. Parishes	5	0	5	0	0	4	4
Total Sept.	71	25,269	29	1	26	140	166
Total Aug.	50	23,135	18	0	7	127	134
Difference	21	2,134	11	1	19	13	32

ROCKY MOUNTAIN AREA
WYOMING
Summary of Field Operations

District—	Com.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Salt Creek	15	2,118	0	0	4	21	25
Big Horn Co.	1	0	0	1	0	5	5
Carbon Co.	2	125	0	1	2	12	14
Conserve Co.	2	50	0	0	0	3	3
Fremont Co.	2	250	0	1	2	9	11
Goshen Co.	0	0	0	0	0	1	1
Hot Springs-Washakie	0	0	0	0	1	3	4
Hot Springs Co.	2	100	1	0	0	5	5
Johnson Co.	1	0	0	1	1	5	6
Natrona Co.	0	0	0	0	1	3	4
Niobrara Co.	2	360	0	0	0	3	3
Park Co.	3	0	0	3	3	18	21
Platte Co.	0	0	0	0	0	2	2
Sweetwater Co.	1	100	0	0	1	5	6
Sublet Co.	3	150	1	0	2	22	24
Uinta Co.	0	0	0	0	0	2	2
Washakie Co.	1	0	1	0	1	3	4
Total Sept.	35	3,253	3	7	18	122	140
Total Aug.	35	5,071	7	6	22	119	141
Difference	0	1,818	4	1	4	3	1

COLORADO
Summary of Field Operations

	Com.	Prod.	Dry.	Gas	Rigs	Drg.	Ttl.
Total Sept.	11	209	5	0	6	76	82
Total Aug.	12	520	5	2	5	76	81
Difference	1	311	0	2	1	0	1

NEW MEXICO
Summary of Field Operations

	Com.	Prod.	Dry.	Gas	Rigs	Drg.	Ttl.
Total Sept.	19	165	8	3	11	99	110
Total Aug.	8	50	6	1	5	92	97
Difference	11	115	2	2	6	7	13

UTAH
Summary of Field Operations

	Com.	Prod.	Dry.	Gas	Rigs	Drg.	Ttl.
Total Sept.	3	0	3	0	2	24	26
Total Aug.	2	0	2	0	2	25	27
Difference	1	0	1	0	0	1	1

MONTANA
Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Cat Creek	0	0	0	0	0	6	6
Kevin-Sunburst	69	1,148	28	13	15	35	50
Miscellaneous	6	60	2	3	6	61	67
Total Sept.	75	1,208	30	16	21	102	123
Total Aug.	74	5,616	18	12	4	123	127
Difference	1	4,308	12	4	17	21	4

KENTUCKY-TENNESSEE
Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Warren	3	8	0	0	0	8	8
Allen	0	0	0	0	0	15	15
Barren	32	160	14	1	0	14	14
Ohio	47	2,942	15	2	0	34	34
Daviess	6	147	2	0	0	8	8
Hancock	3	0	0	0	1	0	1
Cumberland	0	0	0	0	0	1	1
Butler	1	10	0	0	0	2	2
Grayson	2	0	2	0	0	0	0
McLean	0	0	0	0	0	1	1
Hopkins	0	0	0	0	0	1	1
Edmonson	0	0	0	0	0	1	1
Wayne	0	0	0	0	0	6	6
Lee-Owsley	4	170	1	0	0	5	5
Estill	10	15	4	0	0	3	3
Mo.gan	1	2	0	0	0	0	0
Wolfe	0	0	0	0	0	1	1
Johnson-Magoffin	1	5	0	0	2	6	8
Floyd-Knott	1	0	0	1	0	8	8
Knox	0	0	0	0	0	3	3
Laurel	0	0	0	0	0	1	1
McCreary	0	0	0	0	0	1	1
Kentucky	108	3,459	38	4	3	119	122
Tennessee	3	335	1	0	0	31	31
Mississippi	0	0	0	0	11	19	30
Alabama	0	0	0	0	0	7	7
Florida	0	0	0	0	2	12	14
N. Carolina	0	0	0	0	0	1	1
Total Sept.	111	3,794	39	4	16	189	205
Total Aug.	155	4,480	60	2	15	173	188
Difference	44	686	21	2	1	16	17

EASTERN FIELDS
Summary of Work Completed

Fields—	Comp.	Prod.	Dry	Gas
Allegany	55	58	0	0
Bradford	178	324	0	0
Middle Field	5	10	0	2
Venango-Clarion	30	29	2	7
Butler-Armstrong	9	16	2	2
S. W. Pennsylvania	20	11	5	10
West Virginia	86	257	14	47
S. E. Ohio	93	1,104	23	16
Totals, September	476	1,839	46	84
Totals, August	437	2,274	32	61
Difference	39	435	14	23

Summary of Work Under Way

Fields—	Rigs	Drg.	Ttl.
Allegany	9	33	42
Bradford	12	59	71
Middle Field	0	5	5
Venango-Clarion	4	8	12
Butler-Armstrong	9	12	21
S. W. Pennsylvania	4	22	26
West Virginia	41	125	166
S. E. Ohio	27	86	113
Totals, September 30	106	350	456
Totals, August 31	89	431	520
Difference	17	81	64

LIMA FIELD
Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wood	4	13	2	0	1	2	3
Hancock	3	80	0	0	0	4	4
Allen	4	115	0	0	0	4	4
Auglaize	6	104	1	0	0	10	10
Sandusky	2	9	0	0	0	2	2
Mercer	7	21	2	3	0	3	3
Van Wert	0	0	0	0	0	1	1
Seneca	3	0	2	0	0	1	1
Lucas	0	0	0	0	0	1	1
Ottawa	2	5	1	0	0	1	1
Shelby	1	10	0	0	0	0	0
Hardin	2	45	0	0	0	1	1
Wyandot	0	0	0	0	0	1	1
Darke	0	0	0	0	0	1	1
Total Sept.	33	402	8	3	1	32	33
Total Aug.	22	313	3	3	1	27	28
Difference	11	89	5	0	0	5	5

CENTRAL OHIO
Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Knox	3	0	1	2	1	5	6
Ashland	11	0	2	9	3	13	16
Medina	9	8	1	2	1	7	8
Lorain	3	0	0	3	1	4	5
Wayne	3	0	0	3	0	5	5
Holmes	6	153	1	3	5	12	17
Coshocton	3	0	0	3	1	5	6
Cuyahoga	10	0	0	10	0	15	15
Jackson	0	0	0	0	0	1	1
Summitt	1	25	0	0	0	3	3
Muskingum	0	0	0	0	0	1	1
Guernsey	0	0	0	0	2	4	6
Richland	0	0	0	0	0	1	1
Total Sept.	49	186	5	35	14	76	90
Total Aug.	53	352	10	31	18	57	75
Difference	4	166	5	4	4	19	15

INDIANA
Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Blackford	0	0	0	0	0	2	2
Jay	4	52	1	0	0	3	3
Adams	0	0	0	0	0	3	3
Grant	0	0	0	0	0	1	1
Gibson	3	1	1	1	0	9	9
Pike	2	48	1	0	0	6	6
Daviess	2	0	2	0	2	5	7
Sullivan	1	75	0	0	0	4	4
Vigo	0	0	0	0	0	6	6
Allen	0	0	0	0	2	2	4
Knox	0	0	0	0	0	2	2
Dubois	0	0	0	0	0	1	1
Benton	0	0	0	0	0	1	1
Johnson	0	0	0	0	0	3	3
Marion	0	0	0	0	0	1	1
Fountain	0	0	0	0	0	1	1
Martin	0	0	0	0	0	2	2
Monroe	0	0	0	0	0	1	1
Spencer	0	0	0	0	0	1	1
Bartholomew	0	0	0	0	0	1	1
Miami	0	0	0	0	0	1	1
Deca.ur	0	0	0	0	0	1	1
White	0	0	0	0	0	1	1
Montgomery	0	0	0	0	0	1	1
Hancock	0	0	0	0	0	1	1
Lagrange	0	0	0	0	0	1	1
Harrison	2	0	0	2	0	0	0
Tipton	0	0	0	0	0	1	1
Total Sept.	14	176	5	3	4	62	66
Total Aug.	20	653	12	1	3	54	57
Difference	6	477	7	2	1	8	9

ILLINOIS
Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Clark	3	0	3	0	1	2	3
Cumberland	0	0	0	0	0	1	1
Crawford	2	2	0	1	0	5	5
Lawrence	3	93	0	0	0	4	4
Wabash	6	10	4	1	0	5	5
Marion	1	9	0	0	0	1	1
Jasper	1	0	1	0	0	0	0
Morgan	2	19	1	0	0	1	1
Edgar	1	0	1	0	0	0	0
Marshall	0	0	0	0	0	1	1
Macon	0	0	0	0	0	1	1
Madison	0	0	0	0	0	2	2
Shelby	0	0	0	0	0	1	1
St. Clair	0	0	0	0	0	1	1
Tazwell	0	0	0	0	0	1	1
Total Sept.	19	133	10	2	1	26	27
Total Aug.	19	390	10	0	5	29	34
Difference	0	257	0	2	4	3	7

MICHIGAN
Summary of Field Operations

	Comp.	Prod.	Dry	Rigs	Drg.	Ttl.
Saginaw	29	272	2	0	32	32
Shiawassee	1	0	1	0	4	4
Gratiot	1	0	1	0	3	3
Genesee	1	0	1	0	0	0
Alcona	1	0	1	0	0	0
Huron	0	0	0	2	0	3
Muskegon	0	0	0	0	1	1
Crawford	0	0	0	0	1	1
Iosco	0	0	0	0	1	1
Wayne	0	0	0	0	1	1
Charlevoix	0	0	0	0	1	1
Midland	0	0	0	0	1	1
Macomb	0	0	0	0	1	1
Roscommons	0	0	0	0	1	1
Arenac	0	0	0	0	1	1
Sanilac	0	0	0	0	1	1
Total Sept.	24	272	6	3	49	52
Total Aug.	23	375	1	7	52	59
Difference	1	103	5	4	3	7

DEATH OF S. L. MARTIN

Samuel L. Martin, for 10 years a member of The Texas Company's scouting force in the Oklahoma-Kansas fields, and for seven years chief scout, died last week at Sistersville, W. Va., after an illness of over one year. Mr. Martin was born at Sistersville, 48 years ago, and entered the oil fields as a boy. He followed the trend of petroleum through the various booms of Ohio, Indiana, and Illinois, and located in Kansas from which territory he was moved to Tulsa to become chief scout.

ARTHUR RHOADS DIES

Arthur D. Rhoads, aged 58, drilling contractor, who had worked in the oil fields of Pennsylvania, Ohio, West Virginia, Oklahoma and elsewhere, died in his home in Tulsa last Sunday. Mr. Rhoads was born in Franklin, Pa., and is survived by his widow; two sons, L. C. Rhoads of Fort Worth, Tex., and Don Rhoads of Tulsa, and a daughter, Mrs. S. P. Tschappat of Tulsa.

HAZARDOUS DRILLING IN SWAMP AREA

(Continued from Page 31)

to bring it down to less than one-half per cent b.s. Crude to be treated is pumped into gun barrels and then through the electric treating plant or treated with chemicals.

The various grades of crude are separated into different gravity tanks. As little crude as possible is kept in the battery of stock tanks at the field and the daily production is moved to the Vacuum company's tank farm at Rose Bulff.

A few months ago a channel was dredged in the river flowing near the tank farm. Tankers can now be brought to the loading dock at the tank farm and loaded. Eight 80,000-bbl. capacity tanks easily take care of the field storage between tanker shipments.

The farm is about a mile away from the docks. Two centrifugal pumps powered by 350 horsepower motors move the

Manifolds at the Vacuum Oil Co.'s centrifugal pump station at the Lockport tank farm. Crude is pumped from the farm to the docks a mile distant.

oil from the farm to the tankers. While the pumps do not build up a big pressure one pump can send around 6,000 bbls. through the line to the docks hourly. A 16-inch suction line is used and the oil is discharged through a 12-inch discharge line. Approximately 12 hours are required to load the 75,000-bbl. capacity tankers.

Since the discovery of the field three years ago, September 9, 1924, it has produced approximately 3,200,000 bbls. of crude. At present it has 14 flowing wells, two wells producing on air and seven pumpers making around 5,300 bbls. of mostly Grade B oil daily. The producing area is about 1 mile long and a half mile wide.

It is characteristic salt dome production although the dome has not been found. There were no surface exposures to indicate a dome and the field was discovered as a result of drilling prompted by a gas seep. It is the opinion of those studying the field that the dome is so deep it is beyond reach of the drill.

Sensational Wells

Some of the most sensational wells in the history of Louisiana salt dome drilling have been drilled in the Lockport Field. Miller No. 8 is in that category. One year ago the crew was coming out with a core taken at 4,412 feet when the well blew in making a big volume of gas, sand and 3,000 bbls. of oil. Before well connections could be put on the 6, 9 and 12-inch casing had been completely cut away.

Despite every effort to bring the well under control the volume of fluid kept increasing and a few hours later the well was making between 20,000 and 30,000 bbls. of fluid. Pick up pumps were used to save the oil and three days later the well sanded up and quit flowing. While it was blowing wild the drill stem was blown from the hole, the derrick was splintered and a 10,000-pound rotary was blown off the top of the hole and over on the draw works.

After the well sanded up a new derrick was built and the hole cleaned. Finally the well was completed at 4,428 feet making 2,000 bbls. of fluid, 50 per cent salt water.

No. 2 Miller was another wild well and while it was never tamed by the crews it did not play the havoc that No. 8 did. The crew was going in the hole with the bit after coring at 4,364 feet when it blew in. One hour after it had started blowing the sand cut all connections and the casing and the derrick was being wrecked. Crews were hurried in to move the rig and save it. Later the well started catering, cutting out a crater within a radius of 2 or 3 feet around the hole. After spreading out and forming a large crater the well died about a month later.

Tremendous Pressure

An idea of the tremendous pressure in some of the wells may be gained from the actions of No. 11 Miller which came in at 3,749 feet making a large volume of gas and 225 bbls. of oil daily. While coming in the pressure burst the valve on the manifold and permitted that well to blow wild for several days. Later it was drilled down to 4,381 feet and completed as an 800-bbl. well.

The best well in the field is No. 4 Miller which is two years old and still flowing 550 bbls. of pipe line oil daily. The well was completed September 9, 1925, in 21 feet of sand and bottomed at 4,338 feet. The sand was under 147 feet of red gumbo, which formation is the best marker in the field.

No. 4 Miller came in making 40,000,000 feet of dry gas daily. Two days later the well started making oil and increased its flow until it was making 3,400 bbls. of pipe line oil daily through a choke. During the past two years its flow has decreased gradually and it is now making 550 bbls. daily.

The first well drilled at Lockport was No. 1 Lockmore, which was started in July, 1923. It was a junked hole at 3,970 feet and had several shows. The well was drilled 250 feet north of the gas seep. A gasoline rig was used to start the hole and the hole was completed with a steam rig.

No. 2 Lockmore was the second test drilled. It was 1,700 feet north of No. 1 and was abandoned at 2,178 feet. The discovery well, No. 1 Miller, was started while No. 2 Lockmore was being drilled. It came in at 3,860-76 feet which was under 55 feet of red gumbo. The initial flow was made through 1¾-inch choke and the oil tested 24.3 gravity. That well was abandoned in April, 1927.

No. 1 Miller was used in the initial effort to try air lift in Lockport. Only a small compressor was available at the time. Late in 1925 the well was making a big volume of salt water and 120 bbls. of net oil daily. When it was placed on air the well's net oil production jumped to 300 bbls. daily. That production showed a gradual decrease until the well was abandoned and at the same time the water steadily increased. Two other wells are being experimented with on air lift at present.

Fire Hazard

Although the fire hazard in Lockport is great, not a single fire has threatened the field. The marsh itself is a veritable fire trap or rather was. Waste oil collecting in the dead underbrush and swamp growth was a menace. In the event a fire started spreading it would have quickly spread to the trains rendering the field inaccessible.

Each rig is equipped with small fire extinguishers. At strategic points over the field larger capacity tanks mounted on cart wheels and containing chemicals, are held in readiness for a fire. In addition a 4-inch water line has been laid over the entire field and it has numerous taps to attach hose lines. The water pumps are at the central boiler plant on the high ground.

Very little waste oil can be found in the marsh. When any oil escapes it is picked up with pick-up pumps and sent through the treaters. Several of the wells in the field have got beyond control when they blew in and the flow from those wells spread over the marsh. Most of that oil was recovered and very little crude escapes into the marsh now.

Salt water and oil has killed off vegetat on to some extent, however, the marsh still is saturated to some extent with oil. All vegetation near a rig or the trams is killed out or cut away frequently to lessen the danger.

As another precaution and probably the most effective in the event of a fire, canals have been dredged through the marsh to prevent spreading of fire. Those canals have been dredged in squares and are 20 feet wide and about 4 feet deep. Should a serious fire break out the canals would aid materially in confining it to a certain section of the field.

In addition they serve another useful purpose in drawing off waste material in the field. They empty into a bayou running through the field which in turn empties into a river. The bayou is used frequently in the transportation of material. Where the tram system crosses the bayou a pontoon bridge was built out of a barge. When any barge has to pass that point the pontoon is unlocked from the bridge approaches and swung into the bank to permit the barge load of material to pass.

There is only one entrance to the field and that is a bridge crossing a wide bayou. On the approach to the bridge there is a huge sign warning against smoking. Anyone smoking is required to quit before going on the bridge. The no smoking rule is rigidly enforced in the field.

Safety measures in the field have shown gratifying results. Entering into the field proper each workman is greeted by a kindly admonition to observe safety regulations. The character of the drilling and producing makes the field a little more hazardous from a safety standpoint than the average field but to date only two fatal accidents have happened. One of those was when a well blew wild.

A full time safety man is kept in the field. At the field office a modern and complete emergency station is maintained. All minor accidents are given medical attention there and if the wound is serious enough the injured employe is sent to a hospital in Lake Charles, about 10 miles away.

A standing safety committee composed of two drillers, two production men and two helpers was organized with O. H. Eichelberger, field manager, as chairman. That committee holds a weekly meeting and discusses various safety measures. At such a meeting anything observed by a committee member during meeting days that pertains to safety is brought to the attention of the committee.

Once every month the committee makes a thorough inspection of the field. Any change in a field practice that will promote safety is later discussed and adopted. Each week two members of the standing committee make an inspection of the field. Since the safety work was placed on an organized basis the accident toll of the field has been showing a steady decrease even in the minor accidents and is showing results in lessening the number of men off duty.

One thing the Lockport Field did not experience when it was discovered, that was the usual oil field boom. A few tests were drilled far away from the discovery well but without getting showings. The field has been slowly developed and its many unique problems were studied out long in advance of development.

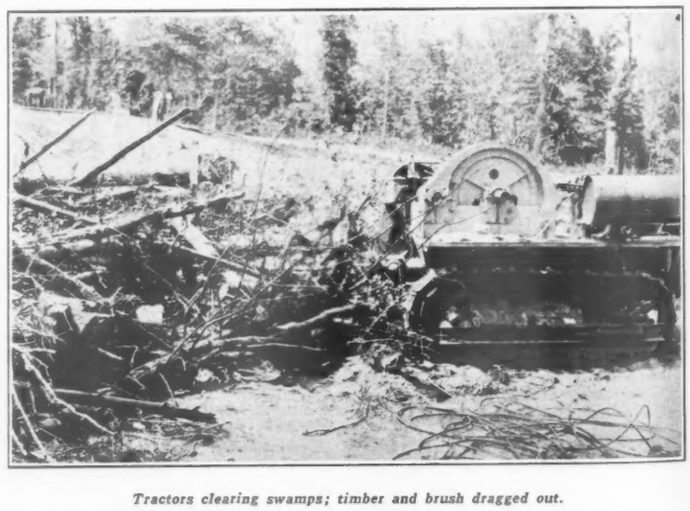
Tractors Clear Locations

Heavy duty tractors with a heavy duty winch arrangement attached are coming into use in clearing locations in the swamp country. Such a piece of equipment is being used extensively by the Vacuum Oil Co.

At Lockport the dense growth of trees in the swamp made it difficult to clear a location. Day laborers found it a slow and disagreeable task to clear the cypress trees away from a tram and derrick location.

The tractor with a long snag line was driven to the edge of the marsh and used to snag the trees out. Although it was a caterpillar drive tractor it was too hazardous to drive it into the marsh for fear of bogging it down.

Cypress and small brush is easily jerked out and dragged to high and dry land. It remains there until it is dry and then burned. Many other uses are also found for the tractor equipped with the heavy duty winch.



Tractors clearing swamps; timber and brush dragged out.

PENNSYLVANIA MARKETS

OIL CITY, Pa., Oct. 1.—Refiners of this district consider that the refined market of Pennsylvania is in better shape than it has been for some weeks. One of the largest refiners in the State has increased its prices for motor gasoline to 8¼ cents, where it was before the decrease made by the concern a short time ago to 7¾ cents. The demand for gasoline is also reported to be holding up better than is usually the case. Kerosene is much better than it has been, with fine demand and better prices. Neutrals are unchanged. Wax is better than a week ago. Fuel oil is unchanged. Bright stocks are now slowing down, although the demand is still fair. Cylinder stocks are improving, both the demand the price being better at most of the refineries.

PRAIRIE P. L. MEN HOLD ANNUAL MEETING

The annual get-together meeting of Prairie Pipe Line Co. field and office employes was held in Independence, Kans. Wednesday, September 28. The business meeting was at 9 a. m. and the banquet and entertainment at 6 p. m. at the Booth Hotel. William F. Gates, president and general manager of the Prairie Pipe Line Co. acted as toastmaster and speeches were made by Thomas J. Fannelly, general counsel for the company who spoke on "loyalty" and George E. Allen, vice president of the Belmont Hotel, Chicago, who delivered a humorous address on "Einstein's Theory of Relativity as Applied to the Pipe Line Transportation of Crude Oil."

Officers of the Prairie Oil & Gas Co. were special guests, and W. S. Fitzpatrick, chairman of the board of directors of the latter company and J. A. Carroll, tax commissioner of the same company made short addresses.

GAS CONSERVATION COMMITTEE PROGRESS

Furthering the plans of the American Petroleum Institute's committee on the conservation of gas the technical subcommittee composed of engineers, scientists and technicians, met during the past week in Tulsa, Okla. The meeting was called by Hollis P. Porter, chairman of the subcommittee, active head of the Tulsa unit.

The discussion was divided into three subjects assigned to members of the subcommittee: 1, well spacing and rate of development; 2, drilling methods and methods of completions; 3, methods of air-gas lift and lease storage. A general research committee was appointed to delve into any or all of the topics.

The report of the subcommittees will be made at the next general meeting of A.P.I. committee at Ponca City, on October 17.

NORTH AND WEST TEXAS

(Continued from Page 39)

2,400 feet, total depth 2,422 feet, plugged back to 2,417 feet. Waggoner Refining Co.'s No. 3 Waggoner-B made 40 bbls. from lime at 2,362-70 feet, total depth 2,400 feet; No. 2 Waggoner-C swabbed 80 bbls. from sandy lime at 2,283-97 feet and broken sand 2,317-37 feet, total depth 2,348 feet.

Young County

Camp Oil & Gas Co.'s No. 1 Peters made 4 bbls. from sand at 747-52 feet after plugging back from 760 feet. Robert Oil Corp.'s No. 1 Allen was dry and abandoned at 785 feet.

WEST TEXAS COMPLETIONS

Crane County

Landreth Production Corp.'s No. 15 State-Cowden-Anderson was good for 240 bbls. of oil and 8 bbls. of water. Tidal Oil Co.'s No. 8 University-F, SW cor. E half NE, Section 46, Block 30, University Land, flowed 650 bbls. at 2,833-2,940 feet.

Glasscock County

Texon Oil & Land Co. and Marland Oil Co.'s No. 1 Settles was deepened to 1,301 feet and flowed 213 bbls. the first 24 hours afterward. This well was completed in April. It has sands at 1,235-63 feet and 1,270-95 feet.

Howard County

Magnolia Petroleum Co.'s No. 7 Mary Chalk swabbed 42 bbls. the first 24 hours and 45 bbls. the second day from sand at 1,651-75 feet; No. 5 Sloane Chalk had sand at 1,570-95 feet and after a 20-quart shot swabbed 75 bbls. Total depth is 1,600 feet. Texon Oil & Land Co. and Marland Oil Co.'s No. 2 Settles was shut down for storage after pumping 400 bbls. initial from sand at 1,280-98 feet.

Loving County

Kingwood Oil Co.'s No. 1 J. O. Moore was abandoned as dry at 5,365 feet. It topped the black lime at 5,227 feet and the Delaware lime at 5,347 feet. One bailer of water per hour showed up at 5,360 feet and this increased to 5 bailers an hour at 5,365 feet.

Mitchell County

Tex-O-Kan Oil Co. and Robert Thraves' No. 1 W. F. Sanders had a hole full of water at 3,325-46 feet and was abandoned.

Val Verde County

Hiawatha Oil Co.'s No. 1 Sellare was dry and abandoned at 3,502 feet.

Gauge in Yates Pool

Seventeen wells in the Yates Pool of Pecos County were gauged for one hour last week by the executive committee in charge of the pipe line proration plan which is being tried out in the field and on the basis of estimates made from these gauges the field is capable of producing more than 170 000 bbls. daily. The 17 wells flowed a grand total of 7,076 bbls. in one hour, or an average of 416 bbls. an hour per well.

Gulf Production Co.'s No. 1 Thompson, located across the Pecos River to the east, Allsman & Bell's No. 1 River Bed, and Red Bank Oil Co.'s No. 1 Smith situated on the southwestern edge of the field, were not gauged. The first well mentioned is making some water and is producing through a choke in order to keep the water back so it was deemed inadvisable to open it. The River Bed well has been open all the time. It averaged 92 bbls. daily the past 10 days, with 5 per cent water content. The Red Bank well has been shut in except for brief periods each day and has averaged about 30 bbls. daily.

Six additional wells are now producing oil in the field but were not completed at the time the gauges were taken. McMan & Marland's No. 2 Yates was flowing 11 bbls. an hour from pay at 1,120-33 feet and still drilling; No. 3 was flowing 60 bbls. hourly from pay at 1,235-1,300 feet and still drilling; No. 4 topped pay at 1,290 feet and flowed 50 bbls. an hour at 1,312 feet. It was drilling at 1,330 feet according to the latest report. Roxana Petroleum Corp.'s No. 1 Tippett topped the first pay at 1,352 feet and at 1,361 feet was flowing 25 bbls. an hour. It was still drilling. The lime in this well was topped somewhere between 1,260 and 1,280 feet, the drillers not knowing the exact depth.

Not Fully Opened

It is interesting also to note that all of the wells tested for one hour were not fully opened. The largest gauge was made by Mid-Kansas & Transcontinental's No. 6 Yates-A which flowed 1,051 bbls. through two 4-inch and one 3-inch lines from the tank to the separator and one 2-inch and one 3-inch from the separator to the well. The next best gauge was made by the same companies' No. 2 Yates-A which flowed 833 bbls. in its allotted hour. Their No. 1 Yates-B made 818 bbls. and No. 7 Yates-A flowed 786 bbls., it will be noted, while No. 3 Yates-B was good for 657 bbls.

DATA CONCERNING HOURLY GAUGES, YATES POOL

Company—	Well	Hourly Production	Area in sq. in. of flow line or choke	Remarks—
Mid-Kansas	Yates A-1	150	13.33	
Mid-Kansas	Yates A-2	833	31.42	
Mid-Kansas	Yates A-3	100	13.33	Flow by heads.
Mid-Kansas	Yates A-4	302	12.57	
Mid-Kansas	Yates A-5	213	7.05	
Mid-Kansas	Yates A-6	1,050	28.30	
Mid-Kansas	Yates A-7	787	28.30	
Mid-Kansas	Yates B-1	818	25.14	
Mid-Kansas	Yates B-2	231	14.10	
Mid-Kansas	Yates B-3	657	26.67	
Mid-Kansas	Yates C-1	222	12.57	
Mid-Kansas	Smith-Taylor 1	180	25.14	Gas above oil zone.
Simms Oil Co.	Smith 1	114	25.14	Flow by heads.
California Co.	Yates 1	488	12.57	Gas above oil zone.
Gulf Production Co.	Smith 1	72	12.57	Flow by heads.
Gulf Production Co.	Thompson 1	19	0.049	
Marland	Yates A-1	377	12.57	33 bbls. water.
McMan-Marland	Yates 1	318	25.14	
Allsman-Bell	1	4	3.14	Flow by heads through 2" tubing 5% water.
	19 wells	6,935 bbls.		

NORTH CENTRAL TEXAS COMPLETIONS

Brown County

Creath's No. 1 Perry was dry and abandoned at 1,628 feet. Deauvaux' No. 1 Giddings was also a duster at 1,606 feet. Forest Oil Co.'s No. 10 Smith made 150 bbls. after a shot of 1½ quarts at 1,326-44½ feet. Gilman & McMurray's No. 17 Teston was shot with 20 quarts at 1,233-56 feet and produced 60 bbls. afterward.

J. K. Hughes' No. 1-A Gilbreath made 358 bbls. initial from sand at 1,334-50 feet, total depth 1,352 feet, and has since increased to 409 bbls. Humble Oil & Refining Co.'s No. 3 Byler was good for 144 bbls. at 1,325-38 feet; No. 13 Foster had 50 feet of oil in the hole at 1,168-84 feet and was completed as a key well for restoring gas pressure to the field. Same company's No. 1 Gilbreath made 330 bbls. at 1,314-30 feet.

Roxana Petroleum Corp.'s No. 15 Smith was shot with 8 quarts at 1,334-54 feet but without results and was shut down for orders; No. 18 Smith made 106 bbls. at 1,314-41 feet; No. 19 made 144 bbls. at 1,333-49 feet; No. 23 Smith swabbed 80 bbls. in 17 hours from sand at 1,313-32 feet, total depth 1,333 feet.

Selby Oil Co.'s No. 16 Ellis was a 15-bbl. well after a 5-quart shot in sand at 1,327-39 feet, total depth 1,340 feet. Sinclair Oil & Gas Co.'s No. 4 Smith was producing 500 bbls. from sand topped at 1,315 feet and drilled to 1,325 feet, with the bit still in sand. Same company's No. 5 Smith made 200 bbls. at 1,325-35 feet. E. L. Smith Oil Co.'s No. 7 Smith was good for 350 bbls. at 1,320-42 feet.

Clark and others' No. 1 Guyer made 10 bbls. at 788-96 feet. Natural Gas & Fuel Co.'s No. 2 Newton was completed for 1,400,000 feet of gas after a 30-quart shot at 1,340-60 feet. Warren Development Co.'s No. 1 Leeper and others was dry and abandoned at 1,600 feet.

Callahan County

Beams & Kingwood's No. 3-B Jackson was good for 8 bbls. at 904-12 feet, total depth 920 feet. Bradstreet's No. 2 Swafford was dry and plugged at 1,735 feet. It had a showing of oil at 1,669-75 feet.

Prairie Oil & Gas Co.'s No. 2 Baum had a small showing at 1,677-88 feet but was shut down for orders at 1,720 feet; No. 1 Swafford made 90 bbls. at 1,670-1,700 feet; No. 1 Webb had a showing at 1,628-35 feet and at 1,669-70 feet but encountered water at 1,670-76 feet and was plugged back to 1,670 feet where it made 17 bbls. of oil and 5 bbls. of water. Shaw and others' No. 9 Miller was estimated worth 10 bbls. at 1,617-19 feet, total depth 1,654 feet, and will be shot; No. 10 was completed for 80 bbls. at 1,642-58 feet.

Coleman County

Senior Petroleum Co.'s No. 1 Haynes was dry and abandoned at 1,450 feet. It topped the Caddo lime at 1,410 feet. Shadbolt & Creighton's No. 1 Moran was also a duster at 1,600 feet.

Comanche County

Swoveland and others' (formerly Suddereth and others') No. 1 Chapman, which was reported dry and abandoned early in August at total depth of 2,006 feet, has resumed drilling and is now underreaming 6-inch casing through water sand found at 2,305-08 feet.

Eastland County

Chestnut & Smith's No. 1 Martin was abandoned as dry at 3,527 feet. John W. Hooser's (was Hurdleston and others') No. 2 Fox made 60 bbls. at 1,611-16½ feet after plugging back from 1,618½ feet. Latchshaw and others' No. 1 Harbin was completed for 5,000,000 feet of gas at 1,470-77 feet.

Mook-Texas Oil Co.'s No. 6 Sibley made 35 bbls. at 3,062-75 feet; No. 8 Sibley swabbed 4 bbls. in 12 hours from 3,060-66 feet and will be shot. States Oil Corp.'s No. 4 Sibley was a duster at 31,65 feet. It had a show of gas at 3,109-15 feet.

H. H. Adams and others' No. 1 McClelland was completed for 15 bbls. of oil and 5,000,000 feet of gas after a 40-quart shot at 3,864-3,909 feet. Total depth is 3,933 feet.

Belva Oil Co.'s No. 2 Good, which was completed for 200 bbls. at 3,681-88 feet early in September, is preparing to deepen. McLester Oil Corp.'s No. 2 Thorp, which was completed early in August for 585 bbls. from 3,686-91 feet, is also deepening at 3,775 feet. These wells are both in the Ramsower Pool.

Independent Oil & Gas Co. abandoned the location for No. 1 Snider. Root's No. 1 Pelfrey was dry and plugged at 4,090 feet. Texas Pacific Coal & Oil Co. abandoned the location for No. 2 McCall.

McCulloch County

Way and others abandoned No. 1 Zella estate at 740 feet.

Shackelford County

Overlees' No. 1 Smalley was dry and plugged at 1,512 feet. Hope Petroleum Co.'s No. 1 Reynolds, which was completed in May for 3,000,000 feet of gas at 1,001-08 feet, has resumed drilling and latest report was going ahead at 1,070 feet.

NORTH CENTRAL TEXAS AND WEST TEXAS
ESTIMATED DAILY PRODUCTION
Week Ending October 1, 1927

Ranger district—	Prod.
Brown County	23,892
Callahan County	4,745
Coleman County	1,197
Comanche County	1,435
Palo Pinto County	459
Ranger	9,174
Shackelford County	5,792
Stephens County	9,020
Total Ranger district	55,714
Wichita Falls district—	
Archer County	24,460
Baylor County	92
Clay County	545
Cooke County	6,115
Jack County	847
Montague County	10,530
Throckmorton County	1,396
Wichita County	29,073
Wilbarger County	11,303
Young County	12,840
Total Wichita Falls district	97,201
Total North Central Texas	152,915
West Texas district—	
Big Lake Field	23,760
Crane County	105,992
Crockett County	2,454
Ector County	0
Glasscock County	400
Howard County	3,067
Jones County	1,522
Loving County	25
Mitchell County	3,585
Pecos County	17,365
Scurry County	45
Upton County	22,531
Winkler County	9,933
Total West Texas	190,679
Grand total North & West Texas	343,594
Increase	1,951

SAVAGE RE-ELECTED SCOUT PRESIDENT

At its fourth annual meeting, the Mid-Continent Scouts Association re-elected C. E. Savage, of the Carter Oil Co., as president. Charles E. Hewitt, the veteran who has scouted for the Mid-Continent Petroleum Corp. over the Okmulgee domain for many years, was chosen first vice president, and R. T. Miller, of the Sinclair Crude Oil Purchasing Co., who has toured extensively over the Oklahoma fields, as well as doing a few hundred miles daily over the San Angelo territory of West Texas, was elected second vice president. S. Crites, of Phillips Petroleum Co., was elected secretary-treasurer.

The Mid-Continent Oil Scouts Association was organized four years ago at the First International Petroleum Exposition, and since its organization has enjoyed a steady growth. The membership in the association has previously been confined to those who travel the oil field roads in their "Pride of Detroit," doing only actual scouting work; but at this meeting, which was held in Tulsa, Okla., it was decided to invite land men to become members, as well as the chief scouts and assistants.

Bureau of Mines Statistics for Month of August 1927

By G. R. Hopkins

The production of crude petroleum in the United States in August, 1927, as reported to the Bureau of Mines, Department of Commerce, by companies which operate gathering lines, amounted to 77,998,000 bbls., a daily average of 2,516,000 bbls. This represents a decline in daily average production of nearly 11,000 bbls. from the record figure of the previous month.

The decrease in national output was directly attributable to the decline in the Seminole Field, in which production fell from a daily average of 490,000 to 437,000 bbls. Of more than passing importance was the increase in production in the states east of the Mississippi, all, without exception, showing a gain in output over July. Production in California was fairly stable, showing only a small decrease.

Stocks of crude petroleum at refineries and in pipe lines and tank farms east of California again increased at about the same rate as in July. Total crude stocks east of California amounted to 333,673,000 bbls. on August 31, an increase over the previous month of approximately 8,750,000 bbls. Stocks of refinable crude in California continued to decrease and stocks of heavy crude and fuel oil in that state again showed little change. An encouraging feature of the month from the standpoint of the industry was the decrease in stocks of refined oils which, in conjunction with the increase in crude stocks, gives an increase in total stocks in August of only 633,000 bbls. as compared with 7,952,000 bbls. in July.

Refined Products

Runs to stills in August amounted to 71,206,000 bbls., a daily average of 2,297,000 bbls. and a slight decrease from the previous month. This falling off in throughput resulted from decreased runs of domestic crude since runs to stills of foreign crude was the highest since May, 1925.

Gasoline production showed a slight decline from the high mark of the previous month, the total production amounting to 28,010,000 bbls., a daily average of 904,000 bbls. Domestic demand, however, remained at the record level of the previous month, the total of 29,779,000 bbls. being only 5,000 bbls. below July, 1927. Exports of gasoline in August rallied from the decline in the previous month, hence total demand (domestic demand plus exports) for August exceeded that of July and was 12 per cent above the total demand of a year ago. As a result of this record-breaking demand for gasoline in August, stocks were again drawn on materially, being reduced to a total of 33,455,000 bbls. on hand August 31. Stocks of gasoline on hand August 31, 1927, were lower than those of the previous year—an unusual occurrence. At the current rate of total demand, the August gasoline stocks represented 31 days' supply as compared with 37 days' supply on hand a month ago and 35 days' supply on hand a year ago.

Stocks of kerosene, lubricants, and wax were reduced in August. Stocks of kerosene, in particular, were drawn on materially in anticipation of the early fall trade. Demand for gas oil and fuel oils, however, continued to lag behind current output and stocks continued to increase.

The refinery data in this report were compiled from schedules of 332 refineries with an aggregate daily crude oil capacity of 2,913,000 bbls. These refineries operated during August at 79 per cent of their recorded capacity as compared with 332 refineries operating at 80 per cent of their recorded capacity in July, 1927.

Statistics of Important Fields

The Seminole Field in August was unable to maintain its record-breaking production of July and, for the first month since its discovery, showed a decline in output. The total production for August, 1927, was 13,532,000 bbls., as compared with 15,196,000 bbls. in July. This decrease resulted both from a smaller number of completions and from a lower average initial production. The number of drilling wells in the field showed no indication of falling off; in fact, a slight increase in drilling activity, due to developments at Little River, was noted in August.

Production in the Panhandle Field approached the 100,000-bbl.-a-day mark as the relatively small number of completions was unable to counterbalance the natural decline of the old wells. Nothing spectacular was recorded in the Seal Beach, Calif., Field. Many of the wells in this field were being deepened to the Wasem zone in August, but were not expected to be completed before September.

PRODUCTION AND GRAVITY
(Barrels of 42 U. S. gallons.)

	July, 1927 Total	July, 1927 Dy. Av.	August, 1927 Total	August, 1927 Dy. Av.	August, 1926 Total	August, 1926 Dy. Av.	Average Gravity
Seminole	15,196,000	490,000	13,532,000	437,000	425,000	14,000	41.0
Panhandle	3,550,000	115,000	3,160,000	102,000	3,175,000	102,000	36.0
Seal Beach	1,832,000	59,000	1,786,000	58,000	32,000	1,000	24.0

STOCKS AT SEMINOLE
(Barrels of 42 U. S. gallons.)

	July 31, 1927	Aug. 31, 1927	Aug. 31, 1926
Producers' stocks	380,000	473,000	.....
Tank farm stocks	9,565,000	10,651,000	.....
Total stocks	9,945,000	11,124,000	.....

RECORD OF WELLS, AUGUST, 1927
(Barrels of 42 U. S. gallons.)

	Completions: Oil	Gas	Dry	Tot. Initial Production	Av. Initial Production	Drilling August 31
Seminole	80	3	43	131,200	1,640	468
Panhandle	24	10	13	6,700	300	201

ANALYSIS OF SUPPLY AND DEMAND OF ALL OILS
(Including wax, coke and asphalt, in thousands of barrels of 42 U. S. gallons.)

	July, 1927	August, 1927	August, 1926	Jan.-Aug., 1927	Jan.-Aug., 1926
SUPPLY:					
Domestic production:					
Crude petroleum:					
Light	68,866	68,765	54,558	518,703	404,357
Heavy	9,467	9,233	12,451	75,684	88,555
Total crude	78,333	77,998	67,009	594,387	492,912
Natural-gas gasoline	3,119	3,214	2,664	25,165	20,674
Benzol	214	214	179	1,719	1,402
Total	81,666	81,426	69,852	621,271	514,988
Daily average	2,634	2,627	2,253	2,557	2,119
Excess of daily average domestic production over domestic demand	426	217	*58	410	16
Imports:					
Crude	†4,824	6,261	5,332	36,853	42,142
Refined	†1,053	774	2,361	9,757	15,104
Total supply all oils	87,543	88,461	77,545	667,881	572,234
Daily average	2,824	2,854	2,501	2,748	2,355
Change in stocks all oils	7,952	633	‡5,885	51,954	†26,240
DEMAND:					
Total demand	79,591	87,828	83,430	615,927	598,474
Daily average	2,567	2,833	2,691	2,535	2,463
Exports:‖					
Crude	1,089	1,382	1,083	10,010	10,382
Refined	10,057	11,743	10,709	84,085	76,952
Domestic demand	68,445	74,703	71,638	521,832	511,140
Daily average	2,208	2,410	2,311	2,147	2,103
STOCKS (end of month):					
Crude:					
East of California:‖					
Light	277,772	287,465	220,240	287,465	220,240
Heavy	47,158	46,208	57,719	46,208	57,719
California:					
Light	25,301	23,262	32,149	23,262	32,149
Heavy x	91,695	91,965	87,772	91,965	87,772
Total crude	441,926	448,900	397,880	448,900	397,880
Natural-gas gasoline at plants	992	652	590	652	590
Total refined	128,500	122,499	120,151	122,499	120,151
Grand total stocks all oils	571,418	572,051	518,621	572,051	518,621
Bunker oil (included above in domestic demand)	4,077	4,470	4,126	32,646	30,273

*Deficiency. †Revised. ‡Decrease. ‖Includes shipments to noncontiguous territories. ‖Exclusive of producers' stocks. xIncludes fuel oil.

PRODUCTION OF CRUDE PETROLEUM BY FIELDS AND STATES, WITH CLASSIFICATION BY GRAVITY
(Barrels of 42 U. S. gallons.)

Field:	July, 1927 Total	July, 1927 Daily Av.	August, 1927 Total	August, 1927 Daily Av.	Jan.-Aug., 1927	Jan.-Aug., 1926*
Appalachian	2,547,000	82,100	2,740,000	88,400	20,318,000	18,809,000
Lima-Indiana	155,000	5,000	158,000	5,100	1,267,000	1,393,000
Michigan	37,000	1,200	40,000	1,300	293,000	25,000
Ill.-S. W. Ind.	634,000	20,500	671,000	21,600	5,221,000	5,641,000
Mid-Continent	48,824,000	1,575,000	48,596,000	1,567,600	387,758,000	267,838,000
Gulf Coast	4,056,000	130,800	4,014,000	129,500	33,904,000	25,006,000
Rocky Mountain	2,761,000	89,100	2,500,000	80,700	20,843,000	26,409,000
California	19,319,000	623,200	19,279,000	621,900	154,783,000	147,791,000
Total U. S.	78,333,000	2,526,900	77,998,000	2,516,100	594,387,000	492,912,000
STATE:						
Arkansas	3,322,000	107,200	3,230,000	104,200	28,173,000	40,878,000
California	19,319,000	623,200	19,279,000	621,900	154,783,000	147,791,000
Colorado	241,000	7,800	229,000	7,400	1,926,000	1,813,000
Illinois	574,000	18,500	605,000	19,500	4,754,000	5,205,000
Indiana	70,000	2,300	76,000	2,400	567,000	541,000
Southwestern	60,000	2,000	66,000	2,100	467,000	436,000
Northeastern	10,000	300	10,000	300	90,000	105,000
Kansas	3,353,000	108,200	3,297,000	106,400	27,674,000	27,345,000
Kentucky	588,000	19,000	613,000	19,800	4,416,000	4,169,000
Louisiana	1,846,000	59,500	1,864,000	60,100	14,200,000	15,458,000
Gulf Coast	252,000	8,100	254,000	8,200	2,055,000	2,839,000
Rest of State	1,594,000	51,400	1,610,000	51,900	12,145,000	12,619,000
Michigan	37,000	1,200	40,000	1,300	293,000	25,000
Montana	466,000	15,000	455,000	14,700	3,524,000	5,649,000
New Mexico	85,000	2,800	81,000	2,600	910,000	1,041,000
New York	184,000	5,900	200,000	6,400	1,480,000	1,270,000
Ohio	627,000	20,200	662,000	21,400	5,122,000	4,859,000
Central and Eastern	482,000	15,500	514,000	16,600	3,945,000	4,571,000
Northwestern	145,000	4,700	148,000	4,800	1,177,000	1,288,000
Oklahoma	26,861,000	866,500	26,283,000	847,800	182,100,000	114,289,000
Osage County	1,953,000	63,000	1,897,000	61,200	16,454,000	16,582,000
Rest of State	24,908,000	803,500	24,386,000	786,600	165,646,000	97,707,000
Pennsylvania	797,000	25,700	853,000	26,900	6,375,000	5,870,000
Tennessee	5,000	200	9,000	300	39,000	28,000
Texas	17,498,000	564,400	17,936,000	578,600	139,515,000	94,874,000
Gulf Coast	3,804,000	122,700	3,760,000	121,300	31,849,000	22,167,000
Rest of State	13,694,000	441,700	14,176,000	457,300	107,666,000	72,707,000
West Virginia	491,000	15,800	571,000	18,400	4,063,000	3,901,000
Wyoming	1,969,000	63,500	1,735,000	56,000	14,483,000	17,900,000
Salt Creek	1,318,000	42,500	1,109,000	35,800	10,017,000	12,738,000
Rest of State	651,000	21,000	626,000	20,200	4,466,000	5,162,000
CLASSIFICATION BY GRAVITY (approx.):						
Light crude	68,866,000	2,221,500	68,765,000	2,218,200	518,703,000	404,357,000
Heavy crude	9,467,000	305,400	9,233,000	297,900	75,684,000	88,555,000

*Final figures.

STOCKS OF CRUDE PETROLEUM HELD IN THE UNITED STATES

AT REFINERIES (and in coastwise transit thereto). Reported by location of storage:		July 31, 1927	August 31, 1927	August 31, 1926*
East Coast:				
Domestic		8,999,000	9,401,000	8,754,000
Foreign		2,671,000	3,029,000	3,078,000
Appalachian		1,785,000	1,783,000	1,659,000
Indiana, Illinois, etc.		2,561,000	2,746,000	1,844,000
Oklahoma, Kansas, etc.		4,428,000	4,400,000	2,889,000
Texas:				
Inland		1,450,000	1,463,000	1,010,000
Gulf Coast:				
Domestic		6,657,000	6,758,000	7,029,000
Foreign		226,000	203,000	371,000
Arkansas and Inland Louisiana		454,000	448,000	715,000
Louisiana Gulf Coast:				
Domestic		4,559,000	5,126,000	7,060,000
Foreign		1,373,000	1,288,000	1,111,000
Rocky Mountain		1,382,000	1,385,000	1,462,000
Total east of California		36,545,000	38,030,000	36,982,000
ELSEWHERE THAN AT REFINERIES:				
Domestic—Reported by field of origin:				
Appalachian:				
N. Y., Pa., W. Va., Eastern and Central Ohio:	Gross	7,129,000	7,225,000	7,235,000
	Net	6,855,000	6,962,000	6,962,000
Kentucky:	Gross	1,324,000	1,301,000	1,583,000
	Net	1,195,000	1,176,000	1,481,000
Lima-Indiana:	Gross	1,099,000	1,106,000	931,000
	Net	900,000	946,000	731,000
Illinois-S. W. Indiana:	Gross	12,669,000	12,676,000	11,930,000
	Net	12,184,000	12,184,000	11,451,000
Mid-Continent:				
Oklahoma; Kansas; Central, North, and West Texas:	Gross	205,920,000	213,863,000	147,414,000
	Net	194,085,000	201,977,000	135,089,000
Northern Louisiana and Arkansas:	Gross	31,358,000	29,830,000	39,429,000
	Net	27,792,000	27,099,000	37,100,000
Gulf Coast:	Gross	18,106,000	18,103,000	17,683,000
	Net	17,696,000	17,625,000	17,300,000
Rocky Mountain:	Gross	27,434,000	27,478,000	30,384,000
	Net	27,377,000	27,415,000	30,335,000
Total pipe line and tank farm stocks east of California:	Gross	305,039,000	311,582,000	256,594,000
	Net	288,087,000	295,384,000	240,449,000
Foreign crude petroleum on Atlantic Coast		42,000	39,000	75,000
Foreign crude petroleum on Gulf Coast		256,000	220,000	453,000
		298,000	259,000	528,000
Total refinery, pipe line and tank farm stocks of domestic and foreign crude petroleum east of Calif.		324,930,000	333,673,000	277,959,000
CLASSIFICATION BY GRAVITY, (approx.):				
East of California:				
Light crude (24 degrees and above)		277,772,000	287,465,000	220,240,000
Heavy crude (below 24 degrees)		47,158,000	46,208,000	57,719,000
California: Light		25,301,000	23,262,000	32,149,000
Heavy (including fuel)		91,695,000	91,965,000	87,772,000

*Final figures.

INDICATED DELIVERIES OF CRUDE PETROLEUM, EXCLUSIVE OF CALIFORNIA GRADES TO DOMESTIC CONSUMERS (Barrels)

Domestic petroleum by fields of origin:	July, 1927* Total	July, 1927* Daily av.	August, 1927 Total	August, 1927 Daily av.	Jan.-Aug., 1927	Jan.-Aug., 1926†
Appalachian	2,570,000	82,900	2,655,000	85,700	19,970,000	18,905,000
Lima-Indiana	75,000	2,400	112,000	3,600	987,000	1,636,000
Michigan	37,000	1,200	40,000	1,300	293,000	25,000
Illinois and S. W. Indiana	162,000	5,200	671,000	21,600	4,807,000	4,779,000
Mid-Continent	40,514,000	1,306,900	41,397,000	1,335,400	302,530,000	292,757,000
Gulf Coast	4,617,000	149,000	4,085,000	131,800	36,310,000	26,954,000
Rocky Mountain	2,583,000	83,300	2,462,000	79,400	21,503,000	24,965,000
Deliveries and exports	50,558,000	1,630,900	51,422,000	1,658,800	386,400,000	370,021,000
Deliveries	49,845,000	1,607,000	50,414,000	1,626,300	379,897,000	363,288,000
Foreign petroleum	4,830,000	155,800	6,300,000	203,200	37,203,000	42,020,000
Deliveries of domestic and foreign petroleum	54,675,000	1,763,700	56,714,000	1,829,500	417,100,000	405,308,000

NUMBER OF PRODUCING OIL WELLS COMPLETED‡

July, 1927	1,275	January-August, 1927	10,589
August, 1927	1,120	January-August, 1926†	11,997

‡For states east of California, from The Oil and Gas Journal; for California, from the American Petroleum Institute.

IMPORTS AND EXPORTS OF CRUDE PETROLEUM (Barrels)

(From Bureau of Foreign and Domestic Commerce)

	July, 1927*		August, 1927		Jan.-Aug., 1927	Jan.-Aug., 1926†
	Total	Daily av.	Total	Daily av.		
Imports:	4,824,000	155,600	6,261,000	202,000	36,853,000	42,142,000
From Mexico	3,825,000	91,100	3,375,000	108,900	19,091,000	30,464,000
From Venezuela	1,309,000	42,200	2,215,000	71,400	11,055,000	7,711,000
From Colombia	542,000	17,500	381,000	12,300	4,599,000	916,000
From other countries	148,000	4,800	290,000	9,400	2,108,000	3,051,000
Exports:	1,089,000	35,100	1,382,000	44,600	10,010,000	10,382,000
Domestic crude oil:						
To Canada	894,000	28,800	1,200,000	38,700	8,317,000	8,578,000
To other countries	195,000	6,300	182,000	5,900	1,693,000	1,803,000
Foreign crude oil	.....	.....	.....	.....	.....	1,000

Note—No shipments to territories during August.

SHIPMENTS OF CALIFORNIA OIL THROUGH PANAMA CANAL TO EASTERN PORTS IN UNITED STATES (Barrels)

	July, 1927	Aug., 1927	Jan.-Aug.,'27	Jan.-Aug.,'26†
Crude oil	1,124,000	1,313,000	7,279,000	8,905,000
Refined products:	1,862,000	2,144,000	15,860,000	14,913,000
Gasoline	1,133,000	1,268,000	7,771,000	5,572,000
Tops	.....	.....	.....	71,000
Gas oil	315,000	232,000	2,493,000	3,775,000
Fuel oil	413,000	575,000	5,382,000	5,077,000
Lubricants	1,000	69,000	214,000	418,000

*Revised. †Final figures.

COMPARATIVE ANALYSIS (Thousands of barrels of 42 U. S. gallons)

	Production*		Imports†		Exports†		Stocks end of period		Dom. dem.	
	Total	Dy. av.	Total	Dy. av.	Total	Dy. av.			Total	Dy.av.
Crude petroleum:										
July, 1927	71,901	2,319	4,824	156	1,089	35	‡324,930	.....	.....	
August, 1927	71,206	2,297	6,261	202	1,382	45	‡333,673	.....	.....	
Jan.-Aug., 1927	550,622	2,266	36,853	152	10,010	41	‡333,673	.....	.....	
August, 1926	67,589	2,180	5,332	172	1,083	35	‡277,959	.....	.....	
Jan.-Aug., 1926	506,812	2,086	42,142	173	10,382	43	‡277,959	.....	.....	
Gasoline:										
July, 1927	28,118	907	190	6	3,223	104	39,069	29,784	961	
August, 1927	28,010	904	348	11	4,193	135	33,455	29,779	961	
Jan.-Aug., 1927	216,978	893	3,424	14	30,066	124	33,455	195,904	806	
August, 1926	25,942	837	614	20	3,568	115	34,421	26,856	866	
Jan.-Aug., 1926	194,294	800	3,560	15	29,501	121	34,421	172,807	711	
Kerosene:										
July, 1927	4,484	145	.....	....	1,376	44	9,038	2,637	85	
August, 1927	4,420	143	4	....	1,700	55	8,373	3,389	109	
Jan.-Aug., 1927	36,851	152	12	....	12,552	52	8,373	24,513	101	
August, 1926	5,162	167	26	1	2,691	87	8,196	2,729	88	
Jan.-Aug., 1926	40,679	167	50	....	14,611	60	8,196	25,043	103	
Lubricants:										
July, 1927§	2,672	86	.....	....	993	32	7,496	1,811	58	
August, 1927	2,752	89	1	....	754	24	7,491	2,004	65	
Jan.-Aug., 1927§	20,904	86	234	1	6,510	27	7,491	14,713	61	
August, 1926	2,648	85	2	....	660	21	7,226	2,092	67	
Jan.-Aug., 1926	21,457	88	27	....	6,291	26	7,226	15,220	63	
Wax (thousands of pounds):										
July, 1927	47,979	1,548	2,789	90	25,970	838	191,501	32,105	1,036	
August, 1927	41,576	1,341	2,656	86	34,229	1,104	180,645	20,859	673	
Jan.-Aug., 1927	384,798	1,584	11,497	47	216,104	889	180,645	184,877	761	
August, 1926	30,488	983	21	1	27,370	883	165,065	19,678	635	
Jan.-Aug., 1926	429,923	1,769	6,484	27	223,740	921	165,065	163,393	675	
Gas oil and fuel oil:										
July, 1927	33,693	1,087	849	27	4,047	131	‡28,890	.....	....	
August, 1927	34,098	1,100	391	13	4,639	150	‡30,346	.....	....	
Jan.-Aug., 1927	260,335	1,071	5,960	25	32,034	132	‡30,346	.....	....	
August, 1926	31,154	1,005	1,629	53	3,582	116	‡26,500	.....	....	
Jan.-Aug., 1926	237,053	976	10,881	45	24,737	102	‡26,500	.....	....	

*Figures in this column for crude petroleum are runs to stills. †From Bureau of Foreign and Domestic Commerce, subject to revision. Exports, except for wax, include shipments to Alaska, Hawaii, and Porto Rico. ‡East of California. §Revised.

RUNS TO STILLS AND OUTPUT OF REFINERIES IN THE UNITED STATES, AUGUST, 1927

	Crude oil		Unfinished oils	Natural-gas gasoline	Total oils run to stills (Bbls.)
	Domestic	Foreign			
East coast	9,494,000	3,888,000	938,000	121,000	14,441,000
Appalachian	2,477,000	.....	136,000	55,000	2,668,000
Indiana, Illinois, etc.	6,656,000	.....	540,000	157,000	7,353,000
Oklahoma, Kansas, etc.	9,251,000	.....	286,000	368,000	9,905,000
Texas	13,584,000	24,000	772,000	532,000	14,912,000
Louisiana and Arkansas	5,084,000	591,000	140,000	454,000	6,269,000
Rocky Mountain	1,907,000	.....	338,000	112,000	2,357,000
California	18,250,000	.....	*401,000	523,000	19,174,000
United States total	66,703,000	4,503,000	3,551,000	2,322,000	77,079,000
Daily average, 8/27	2,151,700	145,300	114,500	74,900	2,486,400
Daily average, 7/27	2,195,700	123,700	94,900	76,300	2,490,600
Texas Gulf Coast	10,514,000	24,000	680,000	431,000	11,649,000
Louisiana Gulf Coast	3,380,000	591,000	6,000	370,000	4,347,000

Output and losses—	Gasoline (Bbls.)	Kerosene (Bbls.)	Gas oil and fuel oil (Bbls.)	Lubricants (Bbls.)	Wax (lbs.)
East coast	4,021,000	847,000	6,933,000	902,000	16,165,000
Appalachian	1,082,000	312,000	609,000	399,000	6,034,000
Indiana, Illinois, etc.	3,801,000	430,000	2,052,000	305,000	4,982,000
Oklahoma, Kansas, etc.	5,052,000	765,000	3,064,000	198,000	3,618,000
Texas	6,019,000	1,056,000	5,840,000	639,000	5,661,000
Louisiana and Arkansas	2,110,000	431,000	2,387,000	47,000	3,751,000
Rocky Mountain	949,000	139,000	618,000	52,000	1,365,000
California	4,976,000	440,000	12,595,000	210,000	.....
United States total	28,010,000	4,420,000	34,098,000	2,752,000	†41,576,000
Daily average, 8/27	903,500	142,600	1,099,900	88,800	1,341,200
Daily average, 7/27	907,000	144,600	1,086,900	86,200	1,547,700
Texas Gulf Coast	4,726,000	857,000	4,440,000	599,000	5,233,000
Louisiana Gulf Coast	1,645,000	374,000	1,250,000	46,000	3,751,000

Output and losses (cont.)—	Coke (tons)	Asphalt (tons)	Other finished products (Bbls.)	Unfinished products (Bbls.)	Losses (Bbls.)
East coast	10,100	178,500	151,000	40,000	457,000
Appalachian	1,500	.....	24,000	40,000	171,000
Indiana, Illinois, etc.	27,000	23,400	106,000	146,000	229,000
Oklahoma, Kansas, etc.	22,200	400	59,000	147,000	484,000
Texas	19,900	22,100	9,000	318,000	798,000
Louisiana and Arkansas	11,100	57,700	176,000	580,000	153,000
Rocky Mountain	3,000	4,000	23,000	449,000	82,000
California	.....	53,400	195,000	*235,000	224,000
United States total	†94,800	†339,500	743,000	1,955,000	2,598,000
Daily average, 8/27	3,060	10,950	24,000	63,100	83,800
Daily average, 7/27	2,920	10,800	24,100	80,300	81,200
Texas Gulf Coast	17,200	22,100	2,000	124,000	681,000
Louisiana Gulf Coast	9,900	56,400	159,000	460,000	44,000

*Includes 297,000 bbls. net tops rerun. †Wax, coke, and asphalt equivalent to 275.3 pounds per barrel and 5.03 and 5.52 bbls. per ton, respectively.

GASOLINE PRODUCTION BY THE VARIOUS METHODS, AUGUST, 1927 (Barrels)

	Straight run	%	Cracked	%	Natural-gas gasoline	%	Total
East coast	2,500,000	62	1,400,000	35	121,000	3	4,021,000
Appalachian	771,000	71	256,000	24	55,000	5	1,082,000
Indiana, Illinois, etc.	2,027,000	53	1,617,000	43	157,000	4	3,801,000
Oklahoma, Kansas, etc.	3,194,000	63	1,490,000	30	368,000	7	5,052,000
Texas	2,922,000	48	2,565,000	43	532,000	9	6,019,000
Louisiana and Arkansas	1,027,000	49	629,000	30	454,000	21	*110,000
Rocky Mountain	551,000	58	286,000	30	112,000	12	949,000
California	4,009,000	80	239,000	5	*728,000	15	4,976,000
United States total	17,001,000	61	8,482,000	30	2,527,000	9	28,010,000
United States total, 7/27	17,121,000	61	8,355,000	30	2,642,000	9	28,118,000
Gulf Coasts	2,784,000	44	2,786,000	44	801,000	12	6,371,000

*Includes natural-gas gasoline run through pipe lines.

STOCKS HELD BY THE REFINING COMPANIES IN THE UNITED STATES, AUGUST 31, 1927

	Gasoline (bbls.)	Kerosene (bbls.)	Gas oil and fuel oil (bbls.)	Lubricants (bbls.)
East coast	5,264,000	1,750,000	3,889,000	2,562,000
Appalachian	792,000	326,000	878,000	960,000
Indiana, Illinois, etc.	4,146,000	873,000	1,852,000	664,000
Oklahoma, Kansas, etc.	2,652,000	616,000	5,501,000	400,000
Texas	4,317,000	1,541,000	8,500,000	1,837,000
Louisiana and Arkansas	1,853,000	1,251,000	3,091,000	107,000
Rocky Mountain	2,980,000	216,000	635,000	104,000
California	11,351,000	1,800,000	.....	857,000
United States total	33,455,000	8,373,000	*30,346,000	7,491,000
United States total, 7/31/27	39,069,000	9,038,000	*28,890,000	7,496,000
Texas Gulf Coast	3,728,000	1,279,000	6,853,000	1,785,000
Louisiana Gulf Coast	1,752,000	1,218,000	2,498,000	107,000

	Wax (lbs.)	Coke (tons)	Asphalt (tons)	Other finished products (bbls.)	Unfinished oils (bbls.)
East coast	79,717,000	34,100	75,400	121,000	7,196,000
Appalachian	21,997,000	600	2,500	108,000	1,186,000
Indiana, Illinois, etc.	15,891,000	18,800	24,400	130,000	3,296,000
Oklahoma, Kansas, etc.	8,236,000	54,700	1,700	64,000	2,427,000
Texas	10,164,000	60,800	8,300	9,000	9,644,000
Louisiana and Arkansas	33,395,000	64,000	18,500	57,000	2,606,000
Rocky Mountain	11,163,000	70,600	10,000	30,000	2,122,000
California	82,000	.....	51,400	360,000	†10,224,000
United States total	180,645,000	303,600	192,200	879,000	38,711,000
United States total, 7/31/27	191,501,000	305,800	214,100	928,000	39,647,000
Texas Gulf Coast	10,067,000	51,400	8,300	4,000	8,737,000
Louisiana Gulf Coast	33,395,000	61,600	18,300	50,000	2,186,000

*East of California. †Includes 2,788,000 bbls. tops in storage.

Natural-Gas Gasoline

The production of natural-gas gasoline recorded a slight increase in August, 1927, when the total output was 135,000,000 gallons, a daily average of 4,350,000 gallons. This is a little over 20 per cent above the production the previous year, but is considerably below the record established in April, 1927. By far the most important event of the month was the very material decline in stocks. Stocks had risen steadily from 19,057,000 gallons on hand at the end of 1926 to 41,670,000 gallons at the end of July, 1927. In August, 1927, however, an unusually brisk demand was created by buyers who were anxious to take advantage of bargain prices before it was too late. The result was that stocks declined by over 14,000,000 gallons, or 34 per cent.

(Thousands of gallons.)

	Natural-Gas Gasoline					Blended Motor Fuel August, 1927		
	Production*			Stocks End of Month		Natural Gas Gasoline Used	Naphtha or Other Oils Used	Stocks End of Month
	July, 1927	August, 1927	August, 1926	July, 1927	August, 1927			
Appalachian	5,400	5,700	5,100	3,047	2,558	196	149	248
Ind., Ill., etc.	1,100	1,200	1,200	501	306	25	2	16
Okla., Kans., etc.	48,200	48,700	42,900	20,010	10,645	2,014	3,784	745
Texas	25,500	27,200	19,200	15,243	10,709	627	650	229
Louisiana and Ark.	7,000	7,300	6,500	1,004	1,252	237	283	211
Rocky Mountain	4,100	3,900	4,000	541	672	86	27	122
Total east of Calif.	91,300	94,000	78,900	40,346	26,142	3,185	4,895	1,592
California	39,700	41,000	33,000	1,324	1,260	Not available		2
Total U. S.	131,000	135,000	111,900	41,670	27,402	.....	.....	1,594
Daily average	4,230	4,350	3,610	.....	.....	.....	.....	.....

*Approximately 97 per cent net production; 3 per cent gross.

The indicated output of motor fuel from the above and other sources may be expressed by the following table:

(Thousands of gallons.)

	July, 1927	August, 1927	August, 1926
Total gasoline produced at refineries (1), (2)	1,181,000	1,176,400	1,089,600
Raw gasoline blended at plants east of California	3,200	3,200	2,500
Raw gasoline sold direct to jobbers (estimated)	800	800	800
Benzol production (3)	9,000	9,000	7,500
Total motor fuel produced	1,194,000	1,189,400	1,100,400
Daily average	38,500	38,370	35,500
(1) Includes natural-gas gasoline blended at refineries	99,400	97,500	83,600
(2) Includes natural-gas gasoline run through refinery pipe lines in California	11,600	8,600	11,400
(3) Estimated with production of by-product coke as a basis.			

COURTS MAY SUSTAIN REGULATION ON OIL

(Continued from Page 32)

people. The court, appreciating the high importance of the issue, called for reargument of the case and delayed its decision through several terms of court, and finally by a four to three decision condemned the act as unconstitutional in relation to pre-existing debts, but the reasoning of the court was sufficiently broad to strike down the constitutionality of the legal tender enactments in their entirety.

Reversed Itself

An interesting commentary on the decision was that one of the judges who retired from the bench while the case was under consideration but before the opinion was handed down changed his view of the constitutionality of the law. There were two vacancies on the court at the time the decision was handed down which accounted for the four to three decision. Immediately these vacancies were filled and a few months later the court largely of its own motion reopened the question in another case involving the issue and then 15 short months from the original legal tender decision reversed itself and by a five to four decision upheld the constitutionality of legal tender enactments. No one of the seven judges participating in the first holding changed his opinion. The four justices constituting the majority in the first opinion still held that the act was unconstitutional while the three dissenting in the original opinion were joined by the two new members, thereby constituting a majority for the constitutionality of this important legislation.

The significance of a situation of this sort should be absolutely clear to you. The Supreme Court of the United States in a great emergency and under the influence of a powerful public opinion may yield to that opinion. In the second place, the habits of thought, whether conservative or otherwise, and the predilections of the justices have a decided bearing on the ultimate position of the court.

Changing Conditions

No one entertains a higher reverence for the Supreme Court of the United States than I. It is in truth the bulwark of our liberties and its decisions in the past completely justify that tribute, but when we take into account our rapidly growing population, the mighty expansion of our business enterprises, the vast aggregations of capital necessary under our economic system, the large scale production which everywhere now characterizes

all industrial effort, we must realize that the only form of government which could possibly endure would be one sufficently elastic to meet changing conditions. Through the Supreme Court of the United States, this is the type of government under which we now live. In times of great national emergency where there is an overwhelming public opinion in favor of some measure calculated in a most important way to advance the public welfare, the Supreme Court of the United States must and does bow to that influence, and hence it comes to pass that the Constitution of yesterday or of today may not be the Constitution of tomorrow.

Have I not said enough to indicate to you the condition which confronts us? At the moment Congress does not have the power to regulate the business of producing oil. What the future holds no man can foretell. If the public welfare will be advanced and if the national security will be assured by certain reforms in the conduct of our business, we should put ourselves to this task at once. Every oil man knows how difficult it is to find a practical remedy for overproduction. There are serious differences among ourselves, regarding the remedy that should be adopted, but there are at least two things that are indubitably clear: First, a remedy must be found; and, secondly, the industry through voluntary co-operative effort must find and apply it. If we do not meet this responsibility, it is at least my own conviction that should a great emergency arise resulting in an overwhelming public opinion for the legislative regulation of our business that regulation may not only come but it may be upheld by the courts of the country.

PRODUCING NEEDS OF THE NEAR FUTURE

(Continued from Page 29)

so that even if no new fields were discovered in the next four years there would be more than sufficient crude to supply the demand with a production of 1,575,000 bbls. a day.

Looking Over the Prospects

But no one in the oil industry looks for the necessity of squeezing the last drop of gasoline out of a barrel of crude oil at any such near distant date as October 1, 1931. There will be plenty of oil to meet all requirements at that time from fields of the United States and the American-owned fields in Mexico and South America, but it must make the producing branch of the industry pause when it is confronted with the necessity of finding new fields in this country capable of producing say 1,000,000 bbls. a day or more four years from now.

Nothing important may be expected of the territory east of the Mississippi River, although there are geologists who still have confidence that oil in appreciable quantities will be found in the south Atlantic states and the southern states bordering on the Gulf of Mexico. There is a vast unexplored territory in the already producing Rocky Mountain states, and western Kansas yet holds out promise of oil from the Dakota sand even though it is regarded as a water sand with a few notable exceptions like Salt Creek in Wyoming. Western Oklahoma has already shown prolific deep sand production in Logan County which gives promise of oil in paying quantities farther westward even though the financial hazard is extreme and the drilling over a mile deep and slow. The Trinity sand territory underlying eastern Texas and northern Louisiana and southern Arkansas is another deep prospect which has shown oil but which entails much financial risk and slow operating. Less is expected of California in the matter of new fields than of Texas and Oklahoma, but it is yet to be included in any discussion of possible future fields.

The greatest prospect in sight is West Texas. Over 100,000 square miles of territory in the west half of the state is yet unexplored. The few pools in that vast territory if put together would make a very small spot on a map of the West Texas territory. The writer has heard geologists say that the potentialities of West Texas are known, but this statement must be taken with some doubt. It is too big to have been thoroughly gone over geologically and it has merely been scratched by the drill. At present it is the most promising prospect we have.

The oil industry is very young and when one remembers that all the producing wells in the United States would not occupy a space over half the size of the little state of Connecticut, giving each well five acres of space from which to draw its production, it will be seen that there is plenty of oil-producing territory left in the domain of your Uncle Samuel from which to draw our future petroleum needs.

With a return of good prices for crude and the necessity of discovering new sources of production the drill will be put to work in hundreds of new inactive spots, each far from the other, and no doubt exists in the mind of any oil man that oil will be found whenever it is required.

PULLING POWER OF OIL EXPOSITION SHOWN

(Continued from Page 32)

troleum Exposition and the National Aeronautic Association. Cononel Lindbergh spoke again on the need of airports. Colonel Lindbergh told his hearers—and they represented many cities and towns—that the cities which provided suitable flying fields would be the ones to benefit in the near future when commercial and passenger aviation would become an established fact. On the same day, Colonel Lindbergh arrived a number of airplanes belonging to oil companies or oil men arrived in Tulsa with from one to four passengers. The widely-known "Stanolind," of the Standard Oil Co. of Indiana, flew from Chicago to Tulsa, arriving just after Lindbergh landed. It contained Vice Presidents Bullock, Jackson and McIlroy of the Indiana company and James J. McGraw, president of the Exchange National Bank of Tulsa, and treasurer of the International Petroleum Exposition.

Three Big Days

The best days in point of attendance at the exposition were Wednesday, Friday and the closing day, Sunday. Thousands of field men mostly from Mid-Continent fields came to Tulsa for the big show on Wednesday. The visit of Colonel Lindbergh stimulated the attendance on Friday, while on Sunday, with perfect weather, a large crowd was present, many of whom had been kept away by the bad weather on earlier days.

President W. G. Skelly and General Manager J. Burr Gibbons of the exposition expressed themselves as well satisfied with results, and said, in their opinion, the show was a success. About half the exhibitors expressed themselves in favor of a show next year, according to General Manager Gibbons, while many others said they favored a biennial show. The policy of the exposition management has been for a show every two years, but the question will be taken up by the directors later and decision rendered.

Some Exhibits Will Be Permanent

The work of dismantling the show began late Sunday night. Some of the heavy machinery which is under roof will remain for demonstration purposes, but the outdoor display of derricks and rig equipment will be taken down. Permanent foundations have been constructed for these rigs and these will remain undisturbed.

Financially the show had a deficit owing to the bad weather and the fact that so much crushed rock had to be moved in to make good footing for the exposition visitors. It is said that the cost of making the show grounds passable in wet weather really represents the sum of the deficit. The 1927 show paid off a deficit on the 1925 exposition and paid for tearing down, removing and rebuilding the structures that made up the exposition halls, and the road building, grading and other work that entered into the construction of the new exposition grounds. One more day of good weather would have given the exposition a profit. As it is the grounds and buildings are all ready for the next exposition which can be held at a much lower outlay of money than that of this year.

Golf Tournament

Walter Critchlow of Ardmore, Okla., won the third annual International Exposition golf tournament held in Tulsa last week when he defeated Townsend Wilson of Tulsa, 5 and 3, on the Country Club course.

In the semifinals Wilson defeated George F. Johnston of Tulsa, 3 and 1, while Critchlow defeated V. T. Broadhus of Bartlesville, Okla., 1 up. Over 100 golfers took part in the tournament.

Critchlow succeeds G. A. Mattison of Oklahoma City, who won the tournament two years ago.

Other prize winners were:

Low medalist—George F. Johnston.
High medalist—Frank Tack.
A winner—Hastings Moore.
Runner-up—J. S. Alcorn.
Consolation—Tom Moore.
B Winner—Paul Wilson.
Runner-up—J. E. Sanderson.
Consolation—R. E. McAndless.
C Winner—R. B. Collins.
Runner-up—L. A. Gillespie.
Consolation—W. E. Fiest.
D Winner—H. G. Biederman.
Runner-up—C. W. Bliss.
Consolation—W. P. McGinnis.
E Winner—J. E. McDonald.
Runner-up—F. A. Ashby.
Consolation—F. W. Lee.
F Winner—Mylon Jacobs.
Runner-up—Sam T. Allen.
Consolation—R. C. Chenoweth.
G Winner—V. L. Whitmore.
Runner-up—F. S. Gray.
H Winner—F. V. Amos.
Runner-up—W. J. Peddie.

TREND OF GASOLINE TAX LEGISLATION

(Continued from Page 33)

At some time in the future the economic law of supply and demand will be normally operative in the oil industry and the price of gasoline will go up. When that time arrives, gasoline will be high enough that a 5-cent tax added to it will look like the snow on Mount Ranier in April and the gasoline tax burden will come down. Looking at the matter from the viewpoint of the state, in all probability it will come too low or be "wiped out" altogether and leave ambitious highway projects up in the air.

Turning from the broad aspects of the problem, to administrative details, which more nearly concern you gentlmen, since you have no legislative powers but are administrators of the laws passed by the legislature, I would like to suggest a number of things. First, I believe that this body of men ought to interest itself in a uniform gasoline tax law for the United States. I would suggest that a committee be appointed to consider this matter and that a model gasoline tax law, barring possibly the rate, be adopted by this body.

I feel that the co-operation of this body and the oil industry has already been helpful both to the states and the industry. Two years ago in Miami, Fla., and last year in St. Louis, I discussed the question of loss to the industry through shrinkage, outage, bad debts and the actual cost of collecting and insuring the tax. I advocated a 3 cent shrinkage and during the recent sessions of the legislatures, 5 states out of the 11 in which the Indiana company operates, adopted the 3-per cent shrinkage, making 8 in all in our territory. These states frankly recognized that the industry is entitled to recoup its losses and to secure to itself something in the way of compensation for its labors.

Uniform Tax

It is my opinion that viewed from every angle, the so-called tax on imports is the most desirable law so long as it carries a reasonable allowance for shrinkage. It lessens the burden on the industry as well as the state and makes simple the levy and collection of the tax. I am also heartily in favor of placing the tax on the distributor and requiring him to register as such. This again simplifies matters both for the state and the industry and has a great tendency to make "bootlegging" difficult.

Every state gasoline tax ought to be in lieu of any excise by any political subdivision of the state. Municipalities ought not to be allowed to add a 3-cent to the state's 5-cent burden upon a gallon of gasoline.

Finally, it seems to me that in all fairness the public ought to know something about the burden they are bearing. I believe you gentlemen are just as much interested in keeping the common man informed as to the amount of the tax and the direct burden upon him as the oil industry. As I suggested a moment ago, he is apt to wake up some morning and throw your good roads program out of gear. The industry is naturally anxious to keep the tax at a figure where it will not cut into its net realization. I believe specil effort should be made not only to post in service stations placards with the price of the gasoline and the tax added, but that some kind of a colored slip should be handed the customer upon which there would be printed or written in plain, legible characters the amount he paid for the gasoline, the amount which the oil company received and the amount which he pays direct to the state.

Handicap on Generation

In conclusion, might I suggest to those gentlemen whose states need good roads and where a high tax burden has been placed upon gasoline or such a burden is contemplated, that there is no sound legal or economic reason why the present generation should pay for all of the hard-surfaced roads they need at this time. Generations to come will benefit by these roads and there is no reason why they should not share the burden of building them. Everything considered, it seems to me that a bond issue which will build your roads now and a reasonable gasoline tax which will take care of maintenance and provide an interest and sinking fund and contribute in some measure to the cost of building them, is a desirable policy. It gives the maximum amount of hard-surfaced roads immediately without unduly burdening the taxpayer.

FORESEEING GASOLINE FOR USE IN THE FUTURE

(Continued from Page 30)

ly important, and increasingly difficult, to refine the products carefully. Acid treating will result in larger losses and bigger depreciation on antiknock rating. But in that field, too, it is felt that vapor phase refining with fuller's earth will provide the answer of maximum improvement of quality coupled with minimum losses.

Doctor Test Antiquated

As far as the doctor test is concerned there is no question that we are dealing with an antiquated relic. It is true that there is a slight difference in the odor of the products but whether this odor is improved or otherwise by doctor sweetening is entirely a matter of taste with much to be said on both sides. Of course, this does not refer to the odor of hydrogen sulphide, which can be removed very effectively by washing with caustic so that a refined, caustic-washed cracked product has a marketable odor. However, this point is of minor importance as it involves simply a treating cost, and when properly carried out doctor sweetening does not involve the more serious economic loss of an actual loss in product.

We have gone far enough in our analysis to enable us to formulate our guess—for in speculating about even the near future all predictions are little better than guesses—as to what tomorrow's gasoline will be like. It will be prepared more and more by cracking, and cracked products will almost always be kept separate from the straightrun. It will be refined to the extent of making it a stable, colorless motor fuel which will not deposit gums in operation or in tank storage. And it will be sold on the basis of antiknock rating by dealers of unquestioned reliability, so that the motorist who is asked to pay a premium will know that he is getting in return a premium motor fuel.

GREATER SEMINOLE PRORATION EXTENDED

(Continued from Page 29)

Co.; J. C. Denton, vice president and counsel for the Mid-Continent Petroleum Corp.; W. C. Franklin, vice president and counsel for the Tidal Oil Co.; and John H. Brennan, chief counsel for the Barnsdall Oil Co.

The passage of the resolution is thought to have been made easier by the dry holes which have recently been encountered in the Little River area. The field now seems fairly well delimited, and removing the necessity for protecting lease lines from drainage is thought to have resulted in a unanimity of opinion.

Resolution Adopted

The resolution adopted at the meeting follows:

Be It Resolved by the operators in the Greater Seminole area as follows:

1. That for the period of 30 days beginning October 5, 1927, the total production from the Greater Seminole area in the State of Oklahoma, the same specifically to include the so-called Little River district therein, shall be restricted and curtailed to a production of four hundred fifty thousand barrels (450 000) per day; and the production of each operator in said area shall be prorated to accomplish this result. such proration to be conducted as provided for in an order of the Corporation Commission in No. 3.944, applicable to said field, entered August 9. 1927.

2. That during said 30-day period no well in the area covered hereby, including the Little River district, shall be shot; Provided where manifest injury and inequity results to any operator from this restriction on shooting, the umpire, in his discretion, upon proper application of any operator and a review of the facts, may permit such operator to shoot the well covered by the application; Provided, further, that in cases of this character, should the umpire refuse to grant permission to shoot, the aggrieved operator may have the facts of the case reviewed by the operators' committee herein provided for, such committee to have the power either to affirm or reverse the ruling of the umpire; Provided, also, that wherever the umpire or the committee grants permission to shoot under the conditions herein set forth, written notice of the granting of such permission shall be mailed to all of the Seminole operators, such notice to show the following things: (a) The name of the operator receiving permission to shoot; (b) The location of the well to be shot; (c) The size and character of the shot allowed. Be it resolved, further, that to carry out the provisions of this paragraph concerning the shooting of wells that the umpire obtain from each torpedo company doing business in the Greater Seminole area a report showing the shots made by such torpedo company, the size and character thereof, the name of the lease owner, and the location of the wells; and also to report any sales of shells or glycerin to any producer where the delivery is made in the Greater Seminole area.

3. That during the 30-day period covered hereby, the following wells, to-wit: Barnsdall, Section 22, Township 7 North, Range 6 East; Gypsy, Section 33, Township 8 North, Range 6 East; Indian Territory Illuminating Oil, Section 16, Township 8 North, Range 5 East; Gypsy, Section 5, Township 8 North, Range 6 East; Prairie, Section 24, Township 9 North, Range 5 East, any one of which may open up a new prolific producing district, be, by the owner thereof, held in the same condition respecting production that existed at the date of this resolution; it being the further intention of this resolution that other operators drilling wells in the zones surrounding the five wells hereinbefore referred to shall do nothing to prejudice the owners of said five wells in holding said wells in the condition herein required.

4. That Ray Collins be retained as the umpire to carry out the objects of this resolution, and that the committee of five heretofore appointed continue to function as provided in the order of the Corporation Commission of August 9, 1927, R. S. MacArthur being hereby appointed a member of such committee filling the position made vacant by the resignation of George Moody.

5. That the legal committee of the Seminole operators be and they are directed to prepare the necessary petition to the Oklahoma Corporation Commission, asking an order of the Corporation Commission to carry out the provisions of this resolution.

GASOLINES OF HIGHER GRAVITY ARE STRONGER

(Continued from Page 28)

one-quarter and one-half cent spreads which prevailed during the summer months just passed.

Domestic Market

The 58-60 U. S. Motor 437 endpoint gasoline and the lower gravities which still constitute the bulk of the output of Oklahoma refiners are yet to reflect the strength in the higher gravities. The low on the 58-60 437 grade dropped from 6⅛ to 6 cents of Oklahoma during the week with a high of 6¼ cents. The latest decline, which brings the market to as low levels as ever prevailed in the Oklahoma plants, up to Tuesday had not increased the demand at Oklahoma plants.

Representative jobber buyers in the Middle West are authority for the statement that they are being offered U. S. Motor gasoline by refiners from all parts of the Mid-Continent. These jobbers report a satisfactory retail demand considering the time of the year, but this demand apparently cannot absorb all the gasoline available from refiners.

The better demand for high gravity gasolines if it continues will tend to reduce the amount of 58-60 material refined and offered the trade and thus aid that market. This development, coupled with a curtailment of refinery operations, are the only remedies for the domestic market apparent at this time.

Panhandle Competition

Oklahoma refiners are finding that at least two of the four plants now operating in the Panhandle Field of Texas are bringing them additional competition. These refiners have been operating for several months. However, it has not been until the past few weeks that there has been a competitive factor in the Mid-Continent market.

The first gasoline of the lower gravity grades coming from these Panhandle plants did not usually conform to required specifications as to color and odor. The bulk of the Panhandle crude oil has been and still is a difficult crude oil to refine. However, manufacturing and treating processes have been perfected to the point where the gasoline is now generally accepted by the domestic trade.

Although these Panhandle plants have to absorb a freight rate disadvantage in both export and domestic shipments, they have had the advantage of a relatively low crude price for several weeks. The price of 75 cents at the well for Panhandle crude compares with a price of $1.28 to $1.36 for a crude oil of the same gasoline recovery in Kansas, Oklahoma, North and Central Texas. This differential more than offsets the disadvantage of the Panhandle refiners in regard to manufacturing and transportation costs so that they are now in a better position as to profitable operation than a majority of the Mid-Continent refiners.

Considerable Panhandle gasoline has been sold as low 5¾ cents basis Group 3. This material in the hands of resale agents has been offered in considerable quantities at 5⅞ and 6 cents.

Gasoline and Naphtha

The advances in the higher gravity grades the first of the week brought the 60-62 400 to a low of 6½ cents, 64-66 390, 6⅞ cents, 64-66 375, 7 cents and 68-70 360, 7¼ cents. Several refiners were securing one-eighth to one-quarter cent above these low quotations for all or part of their offerings. An exceptionally heavy demand from northern buyers was reported for the 64-66 375 grade. Special interest also was displayed by domestic buyers in regard to the 400 endpoint material.

The write was unable to check any demand for the gravities under 58-60 except an occasional car. This limited movement was generally bringing one-eighth cent under last week's price. The bulk of the 58-60 U. S. Motor gasoline movement was at 6 and 6⅛ cents. Several refiners were still holding to the 6¼-cent price, but it was apparent that the movement at that price did not equal that of a week ago.

Naphtha sellers did not lower their prices during the week. One refiner reported an improved demand which he said was coming from blenders. Colder weather is expected to increase the demand for the high gravity blends as it has the high gravity refinery gasolines.

Kerosene and Distillates

The improvement in the kerosene market which was apparent last week continues. Large purchases for shipment to the Gulf Coast, augmented by a steady small order business from the jobbing trade, has very materially improved the statistical situation of the product in the Mid-Continent. The placing of a 1,000,000-gallon order with a Mid-Continent refiner removed practically all of the 41-43 water white material available at 4⅝ cents. There was a steady movement the first of the week at 4½ to 4⅝ cents to the trade. The 42-44 grade in Oklahoma was scarce at 4¾ cents.

Although it is expected to materialize at any time it cannot be said that the higher kerosene prices have yet brought higher prices for distillates which are quoted the same as last week.

Fuel Oils and Gas Oils

The fact that distillate prices have not advanced may indicate that they are influenced more by the fuel oil situation than kerosene. When fuel oil prices were changed during the past week they were lowered. Sales of the lowest gravity (10 to 14 gravity) were reported as low as 70 cents.

Outside competition has brought a mixed situation in the Oklahoma fuel oil market and there are wide spreads in the quotations of refiners. The Panhandle competition is apparent in fuel oils as well as gasoline. The Panhandle product has a high cold test of around 70 to 75 degrees Fahrenheit, but outside of that characteristic the product is satisfactory to a majority of the domestic buyers. The refiners there make a 28-30 gravity product which they have offered to the Middle West trade as low as 70 cents basis Group 3. Despite the high cold test this product has afforded stiff competition to Oklahoma refiners who are endeavoring to secure 92½ to 95 cents for the same gravity product. Refiners in differential territory are also known to be selling fuel oils from 2½ to 7½ cents under the Oklahoma market.

Gas oils are unchanged. Buyers who are not particular as to color can secure 32-36 material at 2½ cents. The best color grades obtained direct from crude oil are bringing 2⅝ cents.

Natural Gasolines

Although the demand for natural gasolines has not been heavy, the sellers are well taken care of in previous orders and prices the first of the week were steady. Additional buying is expected by the end of the week.

Lubricants and Wax

The largest manufacturer of lubricants in Oklahoma the first of the week said its demand was absorbing all of its current output. Other manufacturers report a fair to strong demand, with no changes in prices. There were no special developments in the wax market during the week.

Late Fields

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ural gas and its casinghead content as a reduction of one factor also affects the other. This is another concrete illustration of where unification of operators will be beneficial to all concerned.

OKLAHOMA

The Greater Seminole area produced 458,677 bbls. from 851 wells on Tuesday of this week. The oil was divided as follows:

Little River	36,706
Bowlegs	139,578
Earlsboro	181,016
Seminole	70,342
Searight	31,035
Total	458,677

The method of production in the Seminole Field as of September 30 showing the number of wells producing by various systems follows:

	Little River	Bowlegs	Earlsboro	Seminole	Searight	Ttl.
By air	2	184	63	127	18	394
Nat. flow	15	5	64	5	26	115
Pumping	0	13	23	137	6	179
Swabbing	0	16	20	33	1	70
Wells off	1	18	33	21	7	80
Total	18	236	203	323	58	838
Wells making water.	3	41	44	99	14	

The status of the field operations in the Greater Seminole area as of the same date shows:

	Little River	Seminole	Searight	Bowlegs	Earlsboro	Ttl.
Locations	4	1	2	4	6	17
Rigs	21	2	3	20	13	59
Drilling less than 2,000 feet	7	0	2	4	7	20
3,099 feet	10	3	3	7	18	41
3,700 feet	29	1	6	17	32	85
Below 3,700	38	15	13	68	86	220
Total	109	22	29	120	162	442

It will be noticed that the number of wells at a shallow depth, and also the number of rigs and locations shows a decrease from previous figures, indicating that new work in the field is slowing up perceptibly.

Another dry hole in the Wilcox sand to the south of production in the Little River Pool has hurt the prospects of that territory. The new dry hole is the Indian Territory Illuminating Oil Co.'s No. 4 Nitey, SW cor. NE Section 2-7-6, a direct west offset to the failures of the Barnsdall Oil Co. and the Twin State Oil Co.'s. The Nitey well had the sand at 4,337-80 feet with a hole full of water and a small show of oil. The Barnsdall Oil Co.'s No. 1 Davis had the Wilcox sand at 4,410-12 feet with a small show of oil in a hole full of water. A light well in this pool is the Indian Territory Illuminating Oil Co.'s No. 2 Dungan, SW cor. SE Section 35-8-6, which swabbed 59 bbls. of oil from the Wilcox sand at 4,337-42 feet, and has 3,000 feet of oil standing in the hole. The Gypsy Oil Co.'s No. 1 Campbell, SW cor. NW SE Section 36-8-6, east of the main body of production, has been making 650 bbls. daily from the Wilcox sand and will be put on air.

In the Earlsboro Pool, the Twin State Oil Co.'s No. 4 Barker, SE cor. NW NE Section 12-9-5, flowed 2,067 bbls. the first 24 hours from sand at 4,237-48 feet.

In the Burbank district of Osage County, George Parker's No. 2, NW cor. NW Section 11-26-6, is flowing 10 bbls. an hour from the regular Burbank sand at 2,815-17 feet. No. 3 on the same lease, NW cor. NE NW Section 11-26-6, is making 25 bbls. an hour from this sand at 2,852-67 feet.

NORTH LOUISIANA

SHREVEPORT, La., Oct. 4.—Moody & Seagraves' No. 1 McCoy, Section 32-16-6e, Richland Parish, Louisiana, was brought in producing 19,000,000 feet of dry gas daily from sand at 2,425-33 feet. Gulf Refining Co.'s No. 2 Marshfield, Section 29-17-6e, same parish, was brought in making 40,000,000 feet of dry gas from sand at 2,447 feet. Magnolia Petroleum Co.'s No. 1 Carroll, Section 1-17-14, wildcat in eastern Union County, Arkansas, is flowing 300 bbls. of oil daily through two 2½-inch chokes. The oil tests 4 per cent basic sediment which is attributed to the fact that the well has not cleaned itself out yet.

DEATH OF W. H. SPAIN

DENVER, Colo., Oct. 1.—William H. Spain, who for 45 years was connected with the Oil Well Supply Co., and was well known among oil men throughout the country, died at his Denver residence recently at the age of 82, after a week's illness. Mr. Spain was for years a director in the Oil Well Supply Co.

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

The Question and Answer Department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired. letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasohs, cannot be answered. The replies will appear on this page within a reasonable time.

QUALITY OF KEROSENE

Can you give the average analysis representing the quality of kerosene that is being sold at this time? We would like to know the gravity, distilling points, flash, fire and viscosity.—H. F. C.

The properties of kerosene vary to some extent as made from the different crudes. The information available is based upon the examination of eight different kerosenes made in the Mid-Continent district. The figures represent the extremes reported.

Gravity	41/ 43	
Initial boiling point	316/390	F.
At 410	10/ 38%	
Max	540/592	F.
Viscosity (Thermovis)	370/480	
Flash	126/180	F.
Fire	146/198	F.

NAPHTHENE AND PARAFFIN BASE LUBRICATING OILS

Is it true that motor oils made from California and similar oils injure the motor and do not otherwise give as good service as the lubricating oils made from paraffin base oils?—O.L.J.

This is a question which has been the subject for much discussion. It was before the Bureau of Mines for special investigation and the following is from the report made in Technical Paper 387:

The purpose of the work was to conduct engine tests to determine the relative merits of western oils that do and do not pass the acidity and emulsion tests as set forth in the Federal specifications for Class C oils.

Four pairs of oils, each pair made by a different refiner from California crude petroleum, were tested in an automobile engine. The test was severe, the engine running continuously for eight hours at high speed under nearly full load. No oil was added during the test period. Consequently, if differences in the oils were of importance, they should have caused variations in the operation or in the mechanical condition of the engine or in the characteristics of the oils themselves after use.

One oil of each pair was nonemulsifying, and had a low acid content. The other oil of each pair emulsified readily and had a high acid content as indicated by the high alkali-absorption number. Each oil was analyzed both before and after use, and the results on engine conditions of the use of each oil were carefully studied. It was concluded that "differences indicated by alkali-absorption number or organic acid content, emulsion, demulsibility, and oxidation numbers, are without significance with regard to engine service."

All of the oils used in these tests seem to lubricate effectively. The oils of high alkali-absorption numbers seem to have lubricated as effectively as those of low alkali-absorption numbers. The test conditions were much more severe than the average conditions of practical service, yet no differences in lubricating efficiency were detectable. The terms paraffin base and naphthene base are often used to describe these oils. In brief, it can be said that a paraffin-base oil is mainly composed of hydrocarbons, with relatively high boiling points, low specific gravity, and low viscosities. A naphthene-base oil is composed of hydrocarbons, with relatively low boiling points, high specific gravities, and high viscosities. Probably different series of hydrocarbons predominate in different oils, but few data are available to show what series are present or in what proportions in any commercial lubricating oil. Such analyses as have been made, however, indicate the predominance of cyclic compounds—in other words, paraffin-base lubricants contain paraffin hydrocarbons only as minor components.

Although from the standpoint of the chemist the subject is obscure, practical experience has shown that for most purposes suitably refined oils of either base may be used with equal satisfaction. However, it is important that proper specifications, based on actual service needs, be used; that is, a specification that would cover a satisfactory paraffin-base oil might not ensure good service if applied to a naphthene-base oil, and vice versa.

Furthermore, the requirements for different types of service differ. One cannot assume that because an oil must have certain characteristics for one class of service it must also have the same characteristics for another class of service. That oil for use in steam turbines will be satisfactory in proportion to its resistance to emulsification with water has long been recognized. To manufacture an oil for use in steam turbines requires especial care and skill; generally, therefore, a non-emulsifying turbine oil commands a higher price than an oil that emulsifies easily. The assumption has often been made, however, that oils that resist emulsification are also superior for automobile engines, but this contention does not appear to be true.

CORROSION AND LEAKS INDICATE FATIGUE OF METAL

Is there any reason why rusting and leaks should occur only around the rivets in a tank which was absolutely tight when built last year? I am told that this condition results from different kinds of iron being used in the plates and rivets and would appreciate your opinion.—D. I. H.

There may be instances where differences in composition of two irons when in contact with water may set up an electric current that will promote corrosion; however, it is hardly possible that there would be enough contrast in the composition of the two irons making up the rivets and the plates in the tank, to produce this condition.

Acknowledging that the mechanical part of the job was all right, we have the fatigue theory to offer. It is well known that if any stress remains well within the elastic limits of the metal, it can be applied any number of times without causing damage. On the other hand, if a metal is subjected to stress beyond the elastic limit and this force removed and repeated a number of times, failure of the metal will result. This is known as the fatigue of metals.

Experiments have demonstrated that an iron having a tensile strength of 64,000 pounds to the square inch, would not permit an alternate application and removal of pull above 35,300 pounds, and the limit of alternate tension and compression was 29,100 pounds to the square inch. The practical application of this is that when metal is hammered and punched while cold fatigue is caused. The metal becomes hard and weakened, therefore subjected to corrosion when the conditions are favorable. This may be the explanation in this case.

AIR OR GAS LIFT ON SHALLOW WELLS AND SMALL PRODUCTION

We are producing about 100 bbls. in a well at 1,500 feet and wonder if an air or gas lift would pay and increase this production after we have several more wells on the lease?—S. R. M.

The following has been received from S. F. Shaw in reference to the above question:

"I note in The Oil and Gas Journal issue of September 29, page 174, quotation which you make from an article which was printed some time ago relative to operation of small oil wells, in which I have indicated the inadvisability of attempting to operate 100-bbl. wells on gas lift. In the light of later experience I wish to modify the statement which I made regarding these small wells. In Seminole, we have operated wells on tapered tubing ranging from 400-bbl. down to 10-bbl. with excellent results, and at an expense considerably less than can be done with the beam pump, particularly in these wells where holes are likely to be crooked, causing excessive wear on rods and tubing. The time off from pumping on gas lift is perhaps not 20 per cent of that when on the beam. To be economically operated, however, wells of 100-bbl. down to 10-bbl. should be handled with compressed air or gas from direct-driven gas engine compressors, particularly when ranging from 25 to 10 bbls. Experiments now being conducted indicate that intermittent flowing of wells ranging in production from 25-bbl. down to 5-bbl. or less will be more economical that continuous flow, though in these wells the greatest economy is reached if the wells are also equipped with tapered tubing.

"The deciding factor in operating small wells is one of capital expenditure. If a lease is already provided with central power and pumping jacks, it is questionable as to whether a compressed air plant could be advised. If the lease is not already provided with any kind of pumping plant, probably air lifts would give greater production at less cost than any other means, assuming, of course, that the installation and equipment of the wells be done in the proper manner. Wells of 1,500 feet in depth would require less than one-third the quantity of compressed air or gas per barrel of oil that is required at Seminole, under equal conditions of pressure."

ABSORPTION PLANT FOR A REFINERY

Is naphtha considered to be a better product for scrubbing refinery gas than distillate or gas oil? What are the essential parts of a naphtha absorption plant for a refinery?—B. C. D.

Naphtha is a more economical absorbing medium than distillate or gas oil because the enriched naphtha may be blended and finished without rerunning. If the refinery conditions are such that the distillate must be rerun, then it may serve in the absorbers before being charged to the stills. The common practice, however, is to use naphtha in refinery gas recovery systems.

The description following is quoted from an article by Col. G. A. Burrell, in The Oil and Gas Journal, March 10, 1927.

The plant is simple, and yields are increased over compression and oil plant practice, providing enough naphtha is used. Naphtha is passed countercurrent from top to bottom in a bubble-type absorber against a rising stream of refinery gas and vapors. The naphtha absorbs the gasoline and increases in gravity and volatility, so that finished motor fuel may come out of the bottom of the tower and be mixed with the regular refinery output. A naphtha should be chosen with insufficient "light ends" and of not too high endpoint, so that the gasoline will be absorbed and a blend made of gasoline characteristics.

A naphtha absorption unit consists of: (1) A compressor for compressing vapors prior to absorption; (2) necessary gathering lines; (3) an exhauster for gathering the gas and putting a slight vacuum on the vapors at their point of withdrawal from the refinery system; (4) scrubbers for washing the gas prior to absorption; (5) necessary vacuum and pressure relief valves on the system at various points; (6) tankage for naphtha and gasoline; and (8) pumps.

The gas and vapors should be put under pressure in order to increase the per cent saturation of the gasoline in the naphtha, and thus cut down the amount of the latter needed. The pressure needed for a certain per cent saturation of gasoline in the naphtha can be determined by mixing in different proportions casinghead gasoline of, say, 90 A.P.I. gravity with the particular naphtha to be used and determining the vapor pressure of the mixtures. These points are plotted and a curve drawn, using vapor pressures in millimeters as ordinates and per cent gasoline in the blend as abcissae. Knowing the richness of the gas in gallons per 1,000 cubic feet, and assuming 30 cubic feet of vapor per gallon of gasoline, one may approximately compute the pressure necessary in a naphtha absorption tower to attain a certain percentage saturation therein.

Typical calculations follow. The naphtha had the following characteristics:

A.P.I. gravity	45.7
I. B. P.	240°F.
F. B. P.	470°F.

This naphtha had a vapor pressure at 70 degrees Fahrenheit and 40 m.m. of Hg. It was blended with varying percentages of casinghead gasoline, and the vapor pressures determined, as follows:

Per Cent Casinghead Gasoline in Blend	Vapor Pressure Millimeters of Mercury
0	40
5	180
10	311
20	413
33⅓	641
100	*1,013

*Estimated.

It was found that the mixed refinery gases from all sources as they came from the refinery had a gasoline content of 2.65 gallons per 1,000 cubic feet. One can assume that each gallon of casinghead gasoline converted in vapor will produce 30 cubic feet of the latter.

The following pressures were then calculated:

Percentage Saturation of Gasoline in Naphtha in Absorption Tower	Pressure in Pounds Gauge
5	32
10	59
15	77
20	92
25	104
30	119
35	129

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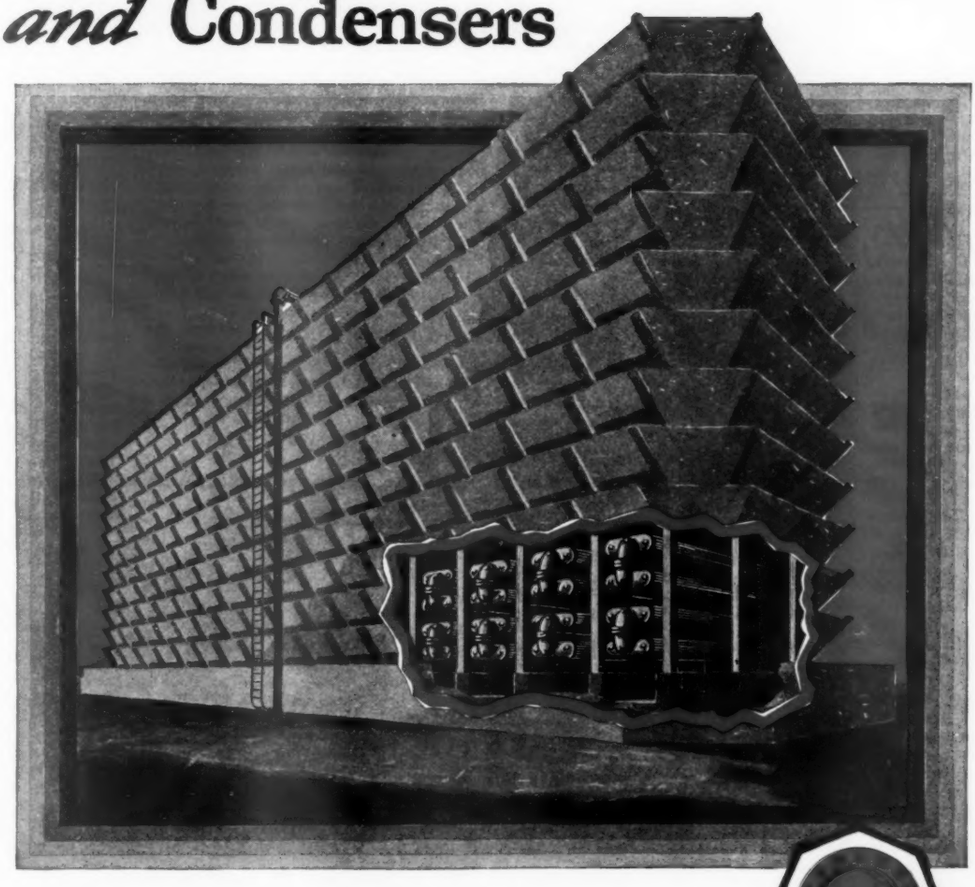

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Varied Uses For Naphtha Reflected In Specifications

By H. T. Bennett*
Chief Chemist, Mid-Continent Petroleum Corp.

The largest consumers of naptha are the paint and varnish manufacturers, the dry cleaners, the rubber manufacturers and the natural gasoline industry. The distillation range of naphtha is controlled to meet the special specifications of the purchaser.

Practically all naphtha specifications require that the initial boiling point or the temperature at which the product begins to boil shall be relatively high, consequently it is always necessary to first remove a light gasoline fraction from the crude. Due to the fact that heavy fractions are also eliminated, it may require a lower temperature to completely volatilize the naphtha than a gasoline meeting U. S. Motor specification of 437 maximum boiling point. As extensive research has shown that certain naphthas serve as very satisfactory substitutes for turpentine, the paint and varnish manufacturers are large consumers of this product.

Naphtha in Paints

As the purpose of the turpentine in a paint is to increase the penetration of the wood by the oil and the undercoats of paint; to render the paint more fluid without the use of an excessive amount of oil and to increase the speed of drying the paint it is necessary that the naphtha used as a substitute meet these requirements. It must evaporate cleanly and at a rate about or slightly slower than ordinary turpentine. It must be free of sulphur compounds which react with white lead paints and cause the paint to darken. Turpentine substitutes with too low boiling points are unsatisfactory due to increased fire hazard and also because of too rapid evaporation.

The volatility of a V. M. & P. (varnish manufacturer and painter) naphtha is often determined by noting the time required for five drops placed in the center of a piece of filter paper to evaporate or by noting the per cent residue left when the naphtha is heated for a definite length of time, about three hours, at the boiling point of water. The presence of objectionable sulphur compounds is determined by the white lead test. In this test the dry white lead is mixed with the naphtha in a small porcelain dish, then covered with a glass, heated on a steam bath for two hours, removed and the color of the white lead observed after 18 hours. Any appreciable darkening of the white lead shows the presence of sulphur compounds.

Naphtha a Good Cleaner

The dry cleaners have also discovered that naphthas are the best cleaning liquids for their use. The dry cleaning process briefly described consists in washing the article to be cleaned by means of naphtha and specially-prepared soap. Properly-cleaned articles must be odorless, free from dirt, and unchanged in shape and color. The term "dry" is used in contradistinction to "wet" in the sense of wet with water. The dry cleaning process is carried out in much the same manner as the washing of fabrics with water and laundry soap except that so-called "dry" solvents such as petroleum naphtha, are used instead of water. On account of cost, the dry cleaning solvent or naphtha must be regenerated in the dry-cleaning establishment and used over and over again.

The evaporation loss must be low, because (1) naphthas are inflammable and the fire hazard is directly proportional to the volatility; (2) as a rule the breathing of the vapors is not healthful for the operators in the plants, and (3) it is not economical to have to replace large losses due to evaporation. Although the evaporation loss must be low, the solvent must be so volatile that it can be evaporated readily from all materials cleaned. A satisfactory naphtha must also be free from impurities that will develop odor or color. The naphtha must be free from water and dirt because, as the name "dry" cleaning implies, the cleaning process must be dry and clean. The color must be water white because the naphtha is used to clean white garments; colored naphtha would impart some color to white materials. The naphtha should not have an unpleasant odor, since this is difficult to remove from garments. The naphtha should not contain heavy, high-boiling point fractions as difficulty would be encountered in completely removing the naphtha from the goods being cleaned.

From the above requirements it will be readily noted that extreme care is required in the manufacture of a naphtha suitable for the dry cleaner.

Other Uses of Naphtha

Considerable quantities of naphtha are consumed by the rubber industry. The main uses are (1) for making rubber solutions or cements for dipping, etc.; (2) for freshening the surfaces of unvulcanized rubber fabrications, for instance, in the manufacture of tires or hose and (3) for purifying certain rubbers.

The vegetable oil industry also uses naphtha as solvents for extracting the oil from seeds. The solvents used in both the rubber and vegetable oil industries must also be carefully manufactured to meet the strict specifications demanded.

Naphtha is also used by the natural gasoline manufacturers for absorbing natural gasoline from casinghead gas and for blending with natural gasoline. The tests of a few naphthas described above, also a comparison with the tests of a commercial turpentine are shown in the accompanying tabulation.

From the tests shown in the table it will be noted that many of the special naphthas have a very narrow boiling range; that is, the difference between the temperature at which the naphtha begins to boil and the temperature at which the product is completely vaporized may be only 50 degrees Fahrenheit to 150 degrees Fahrenheit. Practically all of the special naphthas are completely vaporized at a lower temperature than gasoline meeting U. S. Motor gasoline specifications. In order to obtain a product boiling within such a very narrow range, it is frequently necessary to redistill the fraction first obtained from the crude to eliminate the light and heavy fractions.

Before redistilling the crude naphtha is often treated with sulphuric acid, washed to remove the greater portion of the acid and then neutralized with caustic soda to remove the last trace of acidity. After redistilling the naphtha is again washed with caustic soda or other chemicals to remove sulphur compounds liberated during the distillation. Due to the narrow distillation range specifications, the quantity of special naphtha obtained from a Mid-Continent crude is comparatively small.

Special lines and tanks are also required for the handling of these naphthas, as a slight contamination with a light or heavy fraction would cause the rejection of the product by the paint manufacturer or dry cleaner. Due to the small yield and the extreme care necessary, many refiners do not manufacture these grades of naphtha. As a conse-

(Continued on Page 160)

*Reprinted from Mid-Continent Petroleum Courier.

Short Talks on Specifications

By W. T. Ziegenhain

Pour Point Test for Black Oils and Cylinder Stocks

The pour point test apparatus and procedure, as applied to petroleum oils was discussed in the last issue of The Oil and Gas Journal but when black oils or cylinder stocks are tested, the usual test procedure is carried out to give one result and then the procedure is modified to give a second result. It was found that when testing these heavy oils to determine their pour point, the same oil gave varying results even when closest attention was paid to the specified procedure. The cause of the difference in results was traced to the difference in the history of the oil prior to testing it.

Black oil or cylinder stock, which has been heated and agitated just prior to testing it consistently showed much lower results than the same oil when allowed to stand in the laboratory for several days. The cause of this difference is thought to be in the way the wax crystals form. When the oil is heated and stirred the tendency is to distribute the wax throughout the oil and when it is cooled the crystals are very small and do not interlace to form a network as in the case where the oil is allowed to stand quietly.

The difference in the results varies as much as 40 degrees Fahrenheit when handled under these different conditions prior to the test. The American Society for Testing Materials has provided for the testing of these oils under standardized conditions, the one test being the same as that outlined for other petroleum oils and the other includes heating the oil to 220 degrees Fahrenheit with stirring prior to testing it.

The result of the test when run in the regular manner is called the maximum pour point and the result secured when the oil is heated and stirred is called the minimum, and both results are reported. The value of the pour test is thus lessened from a practical standpoint because of the effect of the history of the sample but the results are relative when several oils are tested and serve as an indication of their relative performance.

The method outlined for making the test is the best available and serves as the best means of showing the performance of the oil in use at low temperatures but is not entirely satisfactory from a practical standpoint as stated before. It remains as a tentative method as outlined by the A. S. T. M.

OIL BURNERS MERGE

CHICAGO, Oct. 1.—The merger of the Aetna Automatic Oil Burner, Inc., of Providence, R. I., and the American Nokol Co. of Chicago has been announced by the heads of the two organizations. The merged companies will be known as the American Nokol Co. The plant and business of the Providence company will be moved to Chicago. The chief difference in the design and operation of the burners is that the Aetna burner atomizes the fuel by means of a revolving plate and is listed to use 28 degree gravity oil or lighter. The Nokol burner atomizes through the use of a venturi nozzle combination and is listed to use fuel having a gravity of 36 degrees or higher. The Nokol burner requires a low flash point for successful operation and is usually classed a distillate burner only.

BY-PRODUCT MOTOR FUEL

Approximately 1,250,000 gallons of motor spirit will be manufactured from coal in 1928 at the plant of the International Combustion Engineering Corp. to be erected at New Brunswick, N. J. The material will be produced as a by-product during the distillation of coal in the manufacture of coal tar and coke. The motor spirits will be sold in the crude state. This plant is the first of its kind in this country, the process having been in successful commercial operation several years at Essen, Germany. The plant will handle approximately 250,000 tons of bituminous slack coal a year through the initial installation of the eight units.

TO DISTRIBUTE STANOLIND

CHICAGO, Oct. 3.—The Consumers Co., of this city announces that it will deliver furnace oil to its customers. It has selected the Stanolind furnace oil refined by the Standard Oil Co., (Indiana) as best suited to its purpose. The Consumers Co. is the leading organization of its kind in the city. It operates 45 yards covering the entire city and all suburbs. Its lines have included coal, coke, ice and building material. The addition of furnace oil to its line of products indicate the increase in the demand for oil among its regular customers. The prices quoted are the same as those named by the Standard Oil Co.

RAILROAD USE OF OIL

The railroads in United States the first seven months of this year consumed 1,156,052,883 gallons of fuel oil a decrease of 4,388,567 gallons from the total for the first seven months of last year. The fuel oil the first seven months of this year cost the railroads $33,471,712 or 2.89 cents per gallon. The cost the first seven months of 1926 was $348,793 less. The total cost of coal and fuel oil used by railroads the first seven months of this year was $181,967,311, a reduction of $2,640,217 as compared with the same period in 1926.

MAMMOTH AIRPLANE

A mammoth airplane, powered by 16 Liberty motors, capable of carrying 100 people is being built by the Lawson Aircraft Co., of Plainview, N. J. The plane will be 90 feet long, with a wing spread of 200 feet. The engines will be grouped in sets of two about the nose and wings of the ship. The total weight of the plane will approximate 50 tons. So great is the wing spread that the wheels of the landing gear will be 42 feet apart.

AUSTRALIAN MOTOR CARS

Oil consumption in Australia is expected to increase rapidly in the future as a result of the decision of Australian business men to build a factory to produce strictly Australian motor cars and at a low price. The plant will be erected immediately.

Neilan Balanced Float Valve

Maintains Constant Level Hot or Cold Liquids

In tanks, cisterns or reservoirs where a constant level of hot or cold water, oil or other liquids is desired the Neilan Balanced Float Valve can be relied upon to give the fullest measure of satisfactory service. It is durable, accurate and sensitive in operation.

For corrosive liquids and gases, and high temperatures, this valve can be furnished with seat rings and balanced valves of stainless steel, Monel metal, aluminum, or other alloys. Regularly furnished with seamless copper floats. Steel, lead coated, or aluminum floats will be supplied when desired. Made in globe and angle patterns.

Suitable for working pressures up to 200 lbs., with cold liquids; up to 150 lbs., with hot liquids. Complete data furnished on request.

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Establish Patent Policy for Employes

Two California Companies Perfect Co-operative Plan to Encourage Research in All Lines of Activity

By Philip Subkow,
Patent Engineer, Union Oil Co.

Since the official announcement of the Patent Policy Plan, the Patent Division has been requested on numerous occasions to explain some of the terms of the plan and the procedure under the plan, and to help various inventors in obtaining the full benefits of the protection which the plan insures them. The purpose of this article is to explain some of the features of the plan and so to answer many questions which may have arisen in the minds of the inventors. Many of the difficulties will be solved, it is believed, by a definition of the terms employed and an explanation of how the plan will act to protect the inventor. Due to the nature of this discussion, the definition and statements are, necessarily, not technical. They do not purport to state the law as applicable to all cases, but are merely to indicate general principles and the spirit thereof.

The Patent Policy Plan is concerned with patents. Patents are obtainable for inventions and are based on disclosures. The plan, in part, operates by determining the patentability of such disclosures. It specifies that on sale. or license, of the patents to others the company will share with the inventor in the profits thus obtained. If the proposed invention is not acceped. the disclosure is returned to the inventor, the company keeping only such shop rights to which it is legally entitled.

Patent Defined

A patent is a grant by the Government of the exclusive right for a period of 17 years to make, use or sell, an invention defined by the patent. Contrary to the popular conception, a patent does not insure to the owner of the patent the right to make, use or sell, the invention. It is, on the contrary, a right to exclude others from the benefits of the invention. Whether the patentee can make, use or sell, his invention depends upon whether in so doing he will infringe other outstanding patents, the owners of which have the right to exclude him from making, using or selling, the invention covered by their patents. Thus, an owner of a broad patent may not be able to use an improvement which is vital to the practical success of his invention, and the patentee of the improvement may also find himself unable to operate under his patent because he will infringe the broad patent. This forms the logical basis for a trade whereby both patentees may profit by co-operating and pooling their patents.

Patent a Contract

A patent is said to be a contract whereby, in consideration of a complete disclosure of a new and useful invention, the Government will give the right to exclude others from the enjoyment of said invention. It will be seen that there are two considerations for the grant. First, a complete disclosure, and second, that the disclosure be of a new and useful invention. No one has yet been able to define an invention. The courts have on occasions stated what is not an invention. Thus, a prominent textbook writer deduces 11 negative rules by which a proposed disclosure can be tested to determine whether it does not disclose an invention; but there are no positive rules by which the disclosure can be tested to determine if it does disclose an invention. There are, however, certain general principles by which one may be governed in such cases. The most basic of these is whether, in view of all that has gone before, as disclosed in printed publications, in patents and in prior use by the public, the inventor has exercised more than ordinary skill in creating the alleged invention; if he has, invention resides in his disclosure, if he has not, there is no invention. We are, however, here as before, faced with another difficulty, for no one has yet been able to measure "ordinary skill." It, therefore, becomes necessary in every particular case, to consider all the elements present in any disclosure and to apply both the general patent law and such technical knowledge as is available and to determine for that particular case whether or not invention is present.

Novelty consists in newness. If the particular invention was never known or used by others in this country, or disclosed in any printed publication or patented before the date on which the invention was made, it is new. The effective date of a United States patent, for purposes of anticipation, is the filing date. If the anticipating publication or patent or public use, is more than two years old before the application is filed, no patent can be granted. Usefulness or utility in the eyes of the patent law means that it is not frivolous or contrary to good morals, and also, that it is capable of operating in the manner described. It has nothing to do with efficiency.

The other consideration, that of a complete disclosure, is also somewhat indefinite. It is said that a complete disclosure is such that anyone skilled in the art can, by the study thereof, make or use the invention disclosed. Here, as before, the standard of comparison is the skill or knowledge of the "ordinary man skilled in the art." His skill must be gathered from a study of the common knowledge of persons in the particular art to which the patent depends on the disclosure, and the character and scope of the protection will depend on the manner in which the disclosure is drawn and on the claims made therein, it constitutes the heart of the patent and requires great care in its preparation.

What Is An Assignment?

An assignment is a conveyance or sale of the entire interest in the patent to another. By so doing the inventor divests himself of all interest in the patent. A license, however, is said to be a contract by which the owner of the patent agrees not to molest the licensee if he uses the invention. The patentee has a right to exclude others from the use of the invention. When he gives a license to another, he merely agrees not to exercise his right to exclude the licensee.

It is well settled that an inventor has no special right to his invention outside the protection set us by the patent laws. If he keeps it secret and this secret is betrayed he may have an action against the betrayer if he can prove the existence of some contract between himself and the betrayer by which secrecy was imposed on the latter. His patent protection starts from the date on which the patent issues.

This company feels, however, that just as an employe has an obligation to it, to promote its interests by aiding in the development of improved devices and processes by which its activities may be facilitated and made profitable; it should see that they are justly rewarded, even before patent protection starts. This company, like all other corporate employers, must depend on the acivity, alertness, initiative and inventiveness of its employes to see that it has the tools with which to meet profitably an ever growing competition and an ever changing situation. It is true, the primary function of an employe is to do his job efficiently and profitably. This is, in the main, the measure of his value to the company. However, the duty of the employes to this company does not end by the doing of their jobs efficiently in the conventional manner, by the employment of the old tools and old processes, profitably, at the moment. The company has the right to expect that its employes will enable it to operate profitably if a change in the industry makes the old methods obsolete, or, if the situation is unchanged, to alter the process and tools so that a greater profit is realized. The person who combines this inventive initiative with a practical ability to operate the tools and processes now at his command is doubly valuable. This company has established a large staff of capable research men to search, and aid others in the search of these improvements, but also, it welcomes developments and inventions from its other employes. The company co-operates with the inventor to the end that his developments be protected and his work made to count to the maximum. It feels that the inventor has placed himself in a special position and it, therefore, is prepared to reward him. That is the purpose of the patent policy plan. It plans to extend the benefits of the inventions to the public so that they may share in the advances devised by its employes. This policy also insures to the employe the advantages of participation in the just rewards thus obtained by sharing with him in royalties or other profits thus realized. This plan is a departure from the traditional policy of employers. It can be said, justly, that the rule is that inventions by employes

EMPLOYE'S INVENTION AGREEMENT

What should be the attitude of companies in regard to employes who develop patentable processes?

This question is often the basis of discussion among groups of technical men and executives. Due to the many improvements constantly taking place in all phases of petroleum technology many oil companies now realize that inventive work on the part of employes should be encouraged. More and more companies are maintaining research departments with the view of originating practical ideas which will aid the company in their operations.

From their angle as individuals, employes are faced with an extremely complicated patent situation, especially in the petroleum industry. Substantial financial backing over a long period of time is invariably necessary before a patent can be worked out on a commercial basis.

Due to this situation a number of companies now have agreements with employes in regard to patents which have proven beneficial to both employers and employes. In this article the agreements of Union Oil Co. and the Associated Oil Co., both California companies, are explained. The material is reprinted from the Union Oil Bulletin of the Union company and the Record of the Associated company.

EMPLOYES' INVENTION AGREEMENT OF THE ASSOCIATED OIL COMPANY

After an exhaustive investigation, the Associated Oil Co. has decided on a definite policy concerning employes' inventions and patents. Accordingly, all previous announcements, notices and plans heretofore issued on the subject, including articles appearing on page 4 of the July, 1921, "Record" issued by this company, circular letter issued July 25, 1921, and suggestion plan issued in August, 1924, so far as it relates to patents and inventions, are hereby terminated.

The company has prepared a printed form of employe's invention agreement. A copy of this standardized form of Employe's Patent Agreement, which is to be signed by all employes in the research and laboratory departments of the refineries, and such other employes as the executives of this company may from time to time determine, may be obtained from the patent attorney at the company's office in San Francisco.

Any other employe of the company who desires the benefit of this plan may apply to the patent attorney and he will forward such employe a copy of the agreement for his execution.

Any employe who has not signed an agreement and believes he has invented any meritorious apparatus, process or product, should submit to the patent attorney such invention as soon as it is conceived by him, in the form of a detailed report, including a brief resume of the method, process or apparatus now in use, if any, and a detailed description of the invention, setting forth all inherent advantages, and, wherever possible, annexing to the report detailed drawings.

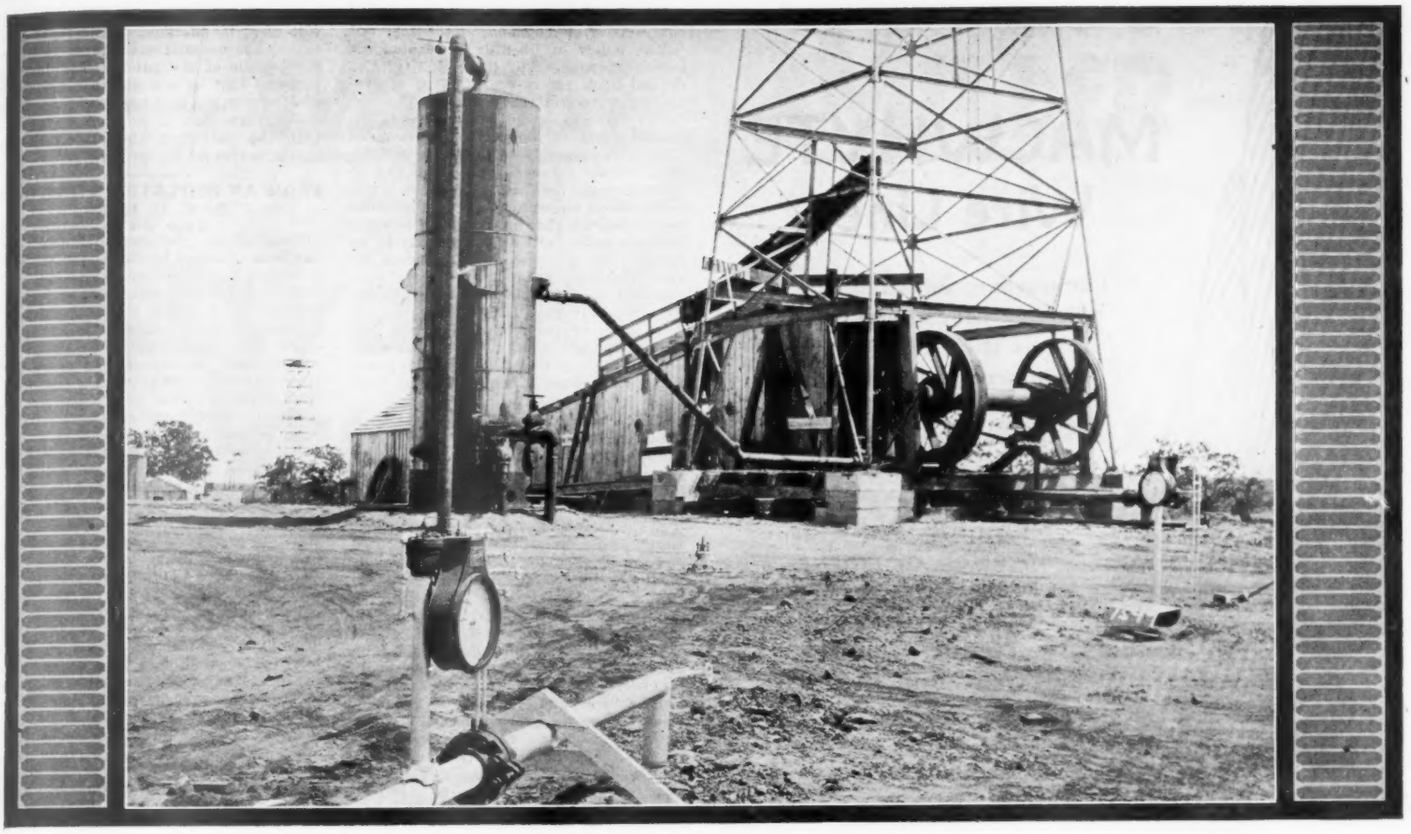
On receipt of this report, the patent attorney will make a preliminary investigation as to its patentability. Such investigations are by no means exhaustive and merely serve to give a general idea of the novelty of the apparatus, process or product.

If in the judgment of the patent attorney the process or apparatus is patentable, he will submit the same to the patent committee, and its recommendation will be the basis of the company's decision to proceed to patent same or to waive its right to secure such patent.

In no event will any action be taken by the company unless an Employe's Invention Agreement has been signed, and then any prosecution of the application for letters patent shall be at the expense of the company.

The patent committee consists of L. D. Jurs, vice president in charge of engineering, transportation and supplies division; L. F. Bayer, vice president in charge of manufacturing division, and Eugene C. Gott, Jr., patent attorney. This committee has been appointed by

(Continued on Page 160)



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in use for air and gas lift at SEMINOLE

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A typical hook-up at the well is shown above, and illustrates how most users install Metrics for practical application. One meter is recording the gas flowing to the well for pressure on the sand, and another is recording the volume of gas coming out. Our engineers will gladly assist with your gas lift problems. Literature upon request.

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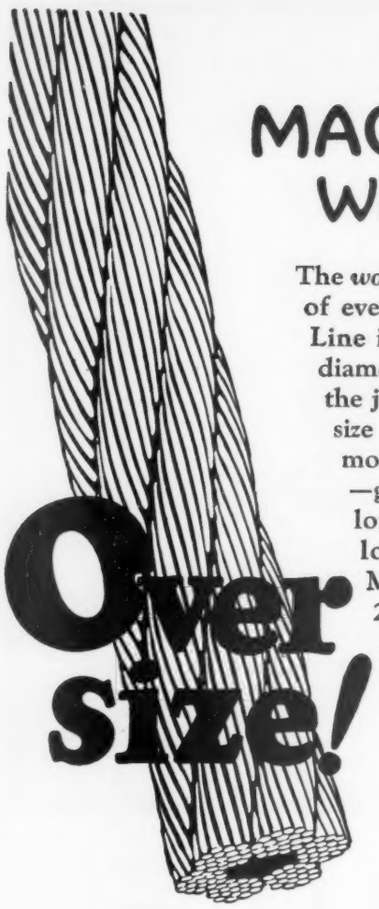

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Wire Lines

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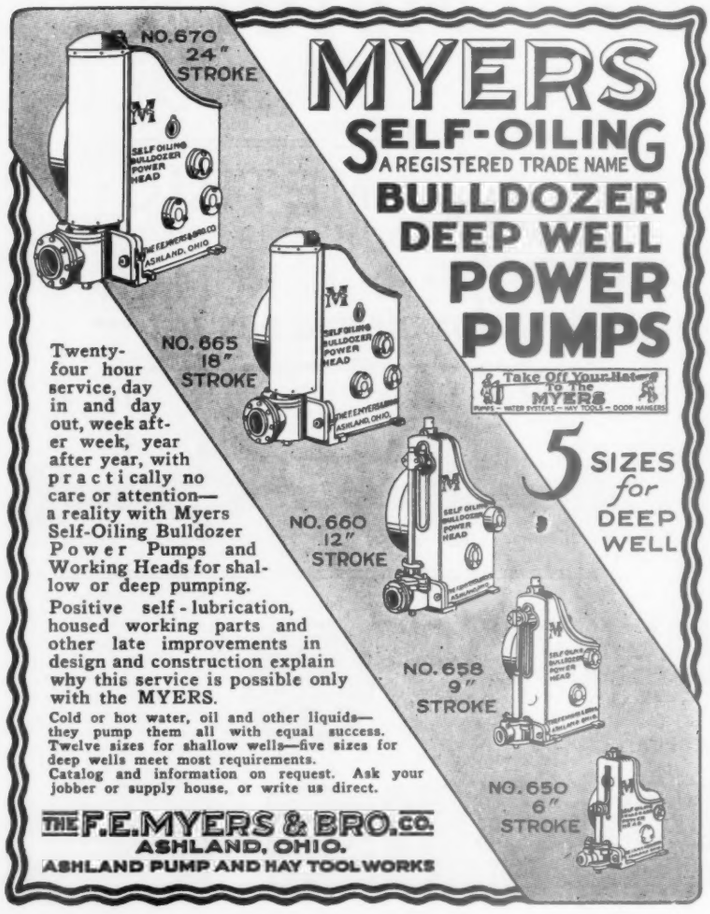
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24" STROKE
NO. 665
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NO. 660
12" STROKE
NO. 658
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NO. 650
6" STROKE
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belong to the employer because of special contracts of employment.

The policy of liberally rewarding the inventor, employed by the Union Oil Co., depend upon the co-operation of the various employes of the company. The best intentions may be futile if there is not a willingness on the part of all to merit them. The success of this plan will depend on the manner with which the inventors come forward with their inventions. It is understandable that each inventor believes that his invention is worth fabulous sums, and it is true that in an industry of this magnitude, a small advance, yielding a small saving per unit, may in a short period result in large profits. In addition to this, there is the natural pride of the inventor in his creation. This results in a secretiveness and a fear that someone will steal the invention and so deprive him of his due share of money and glory.

Company's Viewpoint

Such an attitude has no place in the Union Oil Co. The patent policy plan assures to the inventor that he will get just recognition for any invention that he may make. He may, if he wishes, call it to the attention of the patent policy administrators direct. It is investigated, and the scope of his invention determined by the company. By submitting his disclosure duly executed, he has definitely defined his invention. No one can take from him any portion of his just reward.

The company is interested in obtaining the most from the inventiveness of its members. It, therefore, brings the various abilities and talents at its command to bear upon the problem to the end that they all co-operate and develop the invention. This is to the benefit of the inventor since it insures for him a speedier success. If other members of this company develop improvements, this is to the advantage of the various inventors and of the company. Each inventor is certain of protection for his invention. To him who has discovered the broad principle goes the broad dominant patent, and to him who makes the improvement goes the narrower patent covering his improvement. Additionally, the various inventors are assured that the broad and improvement patents are not in competitive and, therefore, antagonistic hands. This is especially important if the improvement is the practical embodiment of the broad idea. Were it not for the fact that the company holds both patents, the various inventors may find themselves in the position where the holder of the broad patent will not be able to use the improvement vital to the practical success of the idea, while the owner of the improvement patent can not use it without infringement of the broader patent. Some sort of agreement and some division of rewards between the basic and the improvement patentees is essential to the exploitation of the invention. In like manner the company apportions the rewards between him who has made the basic invention and him who has the practical concept, the use of which is desired.

Fourfold Plans

The rewards as provided by the patent policy plan are of fourfold nature. As suggested here, one is the prestige that comes from the origination of a useful and patentable invention which enables the company to profit from its use. Second, the plan provides that in addition to the $100 paid to the inventor on acceptance of the idea under the plan, the company may in such cases where it has profited by the invention, give a greater sum to the inventor. Thirdly, the plan provides that the company may license others under the patent or sell the patent outright. The inventor will share equally with the company in the net profits thus obtained. Fourth, the inventor is saved the cost of patenting, which may prove to be an important consideration. The necessity of protecting the basic invention by improvement patents adds an additional burden. If the inventor should encounter difficulties necessitating appeals to the higher tribunals of the patent office, or to the courts, or must fight interferences with other inventors who may have filed applications for similar inventions, the cost of patenting may become prohibitive for the inventor of ordinary means. The Union Oil Co. has resources to patent and exploit the invention and will give, in addition, considerable prestige to the negotiations leading to licensing or sale of the patent. The inventor will find that he will obtain considerably greater rewards as a result of this patent policy plan than if he were to proceed with the patenting and exploitation of the invention on his own resources.

FROM AN EMPLOYE'S VIEWPOINT

By E. G. Ragatz,
Union Oil Co.

Considerable thought and discussion has been initiated by the Union Oil Co.'s recently-formulated patent policy plan. Being fortunate enough to have been engaged in work which has led to the conception of several patentable ideas, the writer has, naturally, been involved in several such discussions. In every case, after carefully weighing the pros and cons of the proposed policy, the inherent personal advantages contained therein have always entirely outweighed any debatable points which may have bothered some of us when first considering this proposition. It has been suggested that a summarization of these advantages might be helpful to some who are still studying over this policy — and as such, the following outline is offered:

1. No cash outlay required: Any proposition of the nature of the patent policy must be considered in the light of the "majority effect" of the same. The majority of employes who may conceive of a patentable idea do not have the necessary available capital for properly prosecuting their patent application. Lacking capital, they are immediately faced with the problem of prosecuting the application through the services of a poorly qualified solicitor, or of signing away a goodly share of their equity in return for legal financing. If they choose the cheaper solicitor, they may get a good patent, but the chances are aganst it; if they seek to finance the proper prosecution of the patent with outside assistance, the pitfalls are many and obvious, of which the loss of a share of their equity may merely be the start. No such dilemma faces the employe who has access to the Union Oil Co.'s patent policy plan.

Chaotic Condition

2. Assurance of competent prosecution of application for patent: The patent situation in the oil business today is in an extremely chaotic condition, to say the least—patent after patent having been granted containing the same conflicting claims drawn in a slightly different manner, with all that that implies in the way of potential costly litigation. To steer a new patent application through this maze, and obtain a valid claim which will hold in court, requires the services not only of the best of patent solicitors, but the services of a specialist in petroleum practice; such specialized services are available under the patent policy plan.

3. Opportunity for development of conception: In the vast majority of cases, the original patent conception is merely the start—the signpost pointing the right direction. After the conception must come the cutting and trying, the experimentation and development, the gradual evolution of a commercially feasible process or apparatus. During this development stage, the employe-inventor has the advantage of the entire development resources of the company back of his idea—an advantage that can not help but change many an otherwise helpless conception into a valuable commercial proposition.

4. Protection against infringement: Some business organizations are ruthless in their attitude toward patent infringement—particularly when backed by conceivably conflicting patent claims which they may own or control. Such an organization will not hesitate to look up the financial standing of an individual, use his patented idea, and "let him sue"—if he can afford to. When the patent is owned by a corporation which is a leader in the industry, however, the matter of infringement is given greater though, and if infringement still is resorted to, then the whole legal staff of the corporation-owner is available for protection of that patent.

5. Contacts available for effecting ex-

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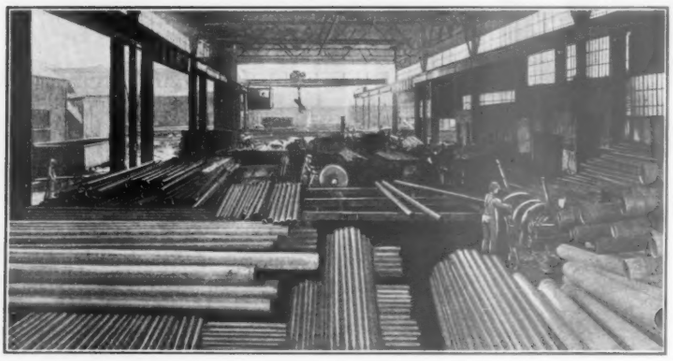

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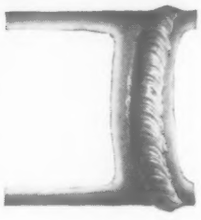

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In All Fields

ploitation: A large corporation is in personal contact with the entire industry, and as such, is immeasurably better situated for furthering the exploitation of a process or apparatus than is the individual inventor.

Advantages Cited

6. Legal and business advice available for exploiting the patent: The advantage involved in the use of the company's prestige, together with its available legal and business advice, for effecting the very best terms possible in exploiting the patent is obvious. Such an advantage the average employe-inventor could never hope to obtain as an individual—as a consequence, if he should obtain a valid patent covering a commercially practicable idea, he may lose part or all of his rightful equity in the same at the "exploitation stage" of its development.

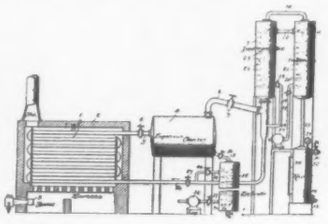
7. Assurance of a full 50 per cent share in net profits: The Union Oil Co.'s patent policy plan specifically states that "The company will endeavor to conclude license agreements or outright sales when desirable, to the end that the interests of both the company and employe may best be served"—and that the employe-inventor will share 50-50 with the company in the net profits of such exploitation. This is a straightforward expression of the spirit of the entire plan, and as such will, in the majority of cases, return considerably more in actual cash to the inventor than if he owned the entire patent outright and had to develop, finance and exploit the same "on his own."

8. One hundred dollars paid on acceptance for prosecution: One hundred dollars may not appear to be a great deal—yet this amount is paid upon acceptance by the company of the application for prosecution, even though the accepted application may actually prove to be worth not a nickel, due to antedating unissued applications on file in the patent office. In such a case, the employe is just that much to the good, in place of being out the corresponding attorney fees required for developing the lack of validity of his conception.

No worthwhile business transaction is ever a one-sided affair. In participating in the Union Oil Co.'s patent policy plan, the employe-inventor receives the direct personal benefits outlined above. In return, while not discounting the value of its share of exploitation profits, the company hopes, as its most important dividend from this policy, to develop a stimulation of inventive effort to the end that the efficiency of its operating equipment and forces may steadily increase. Such an increase in efficiency must, in turn, directly benefit all who are connected with the organization, be they employes, stockholders, or both.

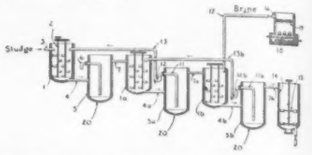
Recent Patents

1,638,116. Apparatus for Cracking Hydrocarbons. Gustav Egloff and Joseph C. Alther, Chicago, Ill., assignors to Universal Oil Products Co., Chicago, Ill., a corporation of South Dakota. Filed December 23, 1920. Serial No. 432,847. Renewed March 24, 1927. Two claims. (Cl. 196—99.)



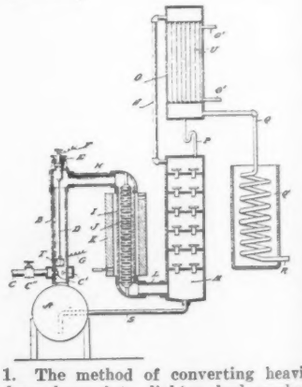
1. In an apparatus for cracking hydrocarbon oils, the combination with a furnace, of a cracking coil therein, an expansion chamber adjacent said coil into which oil is delivered, a reflux condenser, means for passing generated vapors to said reflux condenser, means for feeding charging stock to the reflux condenser to condense the heavier insufficiently cracked vapors, means for discharging residual oil from said expansion chamber, a preheater receiving said oil means for feeding an independent supply of charging stock to said preheater, and means for introducing the heated charging stock from the preheater and the reflux condensate and charging stock from the reflux condenser to said cracking coil.

1,642,060. Art of Obtaining Products From Sludge. Louis Burgess, Bayonne, N. J., assignor to Standard Development Co., New York, N. Y., a corporation of Delaware. Filed December 22, 1922. Serial No. 608,441. One claim. (Cl. 196—148.)



Apparatus for treating acid sludge and the like, comprising two agitators, means for supplying sludge to the first afiitator, a separator receiving effluent from the first agitator and discharging into the second separator receiving effluent from the second agitator, means for supplying a treating solution to the second agitator, and a steam lift for conveying treating solution from the second separator to the first agitator for preliminary treatment of the sludge entering the system, and for maintaining the temperature of the solution.

1,642,624. Process and Apparatus for the Conversion of Heavy Petroleum Oils Into Lighter Oils. Vernon W. Northrup, Hurlock, Md., assignor to The Petroleum Hydrogenation Co. of America, Inc., Wilmington, Del., a corporation of Delaware. Filed November 20, 1924, Serial No. 751,171. Renewed Feb. 8, 1927. Sixteen claims. (Cl. 196—57.)



1. The method of converting heavier hydrocarbons into lighter hydrocarbons which comprises producing a mixture of vapors of said heavier hydrocarbons and a gas having available hydrogen, passing the mixture through an electrifying zone and thereafter through a catalyzing zone which is independent of said electrifying zone.

ATLANTIC O. P. CO. MOVES

HOUSTON, Tex., Oct. 1.—The Atlantic Oil Producing Co. will move its division offices from Houston to the Magnolia Building at Dallas. The move is being made because of the fact that Dallas at present is more centrally located for the company's operations. The land and scouting departments of the company, however, will remain at Houston.

NOTED PALAEONTOLOGIST DIES

PHILADELPHIA, Pa., Oct. 1.—Frank Springer, widely known palaeontologist and writer of many works on that subject, died here, aged 79. His home was in Las Vegas, N. Mex., he was a former regent of the museum of New Mexico and was a member of the museum of comparative zoology, Harvard; Geological Survey of Canada, Smithsonian Institute and the National Museum, Washington, D. C. He was born in Wapello, Iowa.

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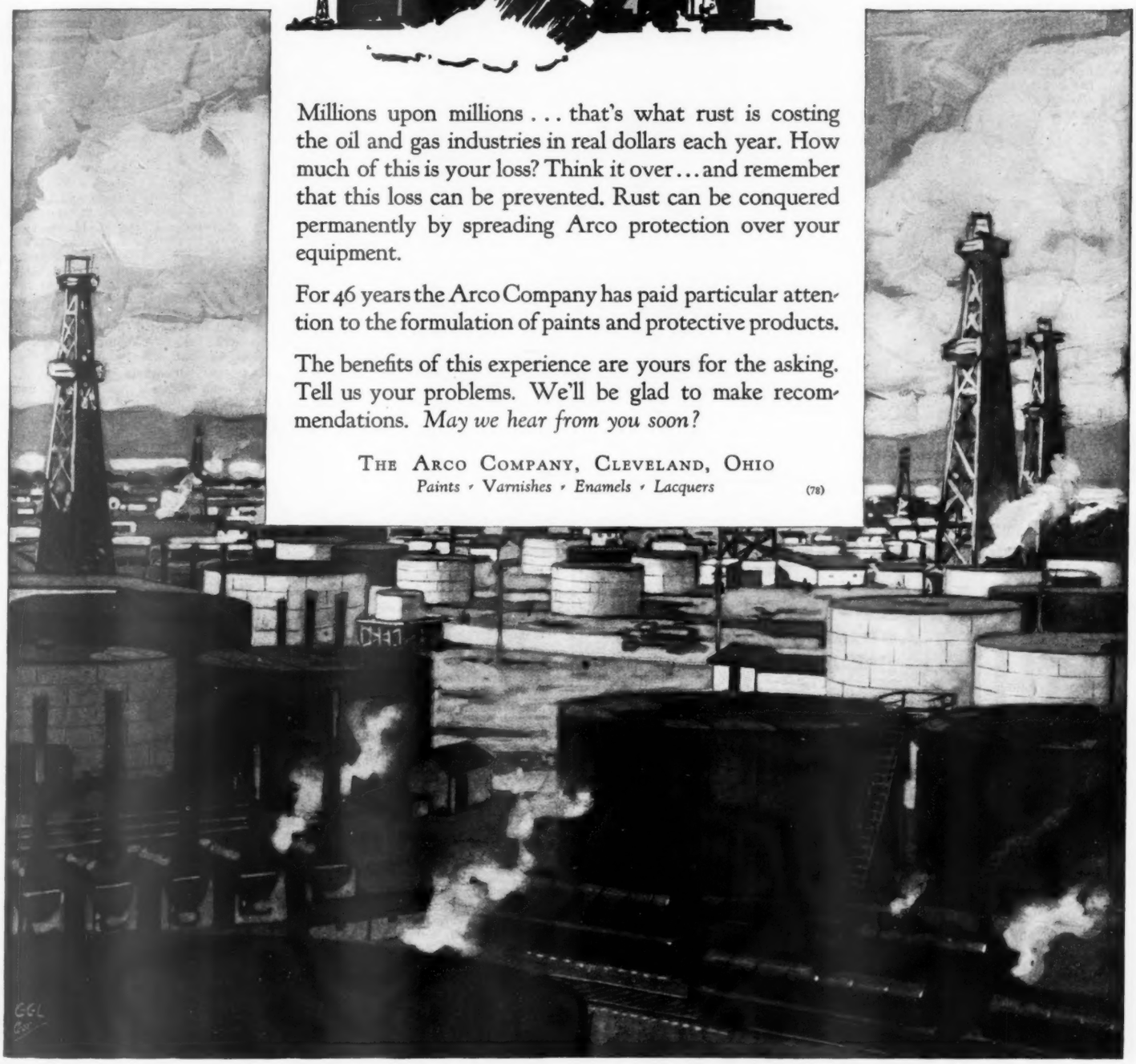

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NEW LOCATIONS IN TEXAS PANHANDLE AND NORTH AND WEST TEXAS FIELDS

FIRST REPORTS

Gray County

Shamrock Petroleum Co.'s No. 1 J. D. Back, 990 feet south and east of NW cor. of the W half of SW, Section 44, Block 25, H. & G. N. Survey.

NORTH CENTRAL AND WEST TEXAS

Archer County

C. P. Burton and others' No. 2 W. R. Farmer-B, 199 feet south and 150 feet west of NE cor. of the east 20 acres of the west 40 acres of the S half of Section 2, North Anderson Ranch Subdivision. Consolidated Oil Co.'s No. 1 Earl Bearden, 150 feet south and west of NE cor. of the SW of the John Riley Survey, A-364. Same company's No. 1 O. T. Norred, 1,470 feet south and 2,790 feet east of NW cor. of Section 8, B. B. B. & C. Survey, A-981. Jeffers & Jeffers' No. 1 W. L. Andrews-C, 150 feet north and east of SW cor. of the south 30 acres of the north 40 acres of Section 2, Chambers-Dobbs Subdivision. G. C. Frarley Survey, A-129. A. Monninger and others' No. 1 J. B. Wilson estate, 150 feet south and west of NE cor. of Lot 1, Section 17, Wilson Subdivision, Dallas County school lands, A-113. Republic Production Co.'s No. 1 G. W. Dugan, 150 feet north and west of SE cor. of Section 2, S. P. R. R., A-1,193.

Brown County

Cranfill & Reynolds' No. 11 M. L. Smith, 709 feet south and 150 feet east of the NW cor. of the M. L. Smith 87.25-acre tract out of Section 3, S. A. & M. G. Survey, A-850. Humble Oil & Refining Co.'s No. 3 Jim Gilbreath, 451 feet north and 161 feet east of SW cor. of the R. F. DeBord Survey, A-2,136. Phillips Petroleum Co.'s No. 3 C. Newsome, 1,637 feet south and 150 feet east of NW cor. of the G. R. Davis Survey, A-2,106, and located in the H. Presslar Survey, A-2,040. Same company's No. 4 C. Newsome, 447 feet south and 162 feet east of the NW cor. of the G. R. Davis Survey, A-2,106. Roxana Petroleum Corp.'s No. 19 M. L. Smith, 503 feet south and 798 feet east of NW cor. of their 60-acre lease out of Section 1, S. A. & M. G. Survey, A-849. Same company's No. 20 M. L. Smith, 503 feet south and 798 feet west of the NE cor. of their 60-acre lease out of Section 1, S. A. & M. G. Survey, A-849. Roxana Petroleum Corp.'s No. 21 M. L. Smith, 503 feet south and 474 feet west of NE cor. of their 60-acre lease out of Section 1, S. A. & M. G. Survey, A-849. Same corporation's No. 22 M. L. Smith, 503 feet south and 161 feet west of NE cor. of their 60-acre lease out of Section 1, S. A. & M. G. Survey, A-849. Same corporation's No. 23 M. L. Smith, 503 feet north and 474 feet west of SE cor. of their 60-acre lease out of Section 1, S. A. & M. G. Survey, A-849. Same corporation's No. 24 M. L. Smith, 503 feet north and 161 feet west of SE cor. of their 60-acre lease out of Section 1, S. A. & M. G. Survey. Selby Oil & Gas Co.'s No. 17 H. J. Ellis, 710 feet south and 150 feet west of NE cor. of their 130-acre lease out of Section 3, S. A. & M. G. Survey, A-850. Sinclair Oil & Gas Co.'s No. 6 M. L. Smith, 450 feet south and 161 feet west of NE cor. of the east 20 acres of the south 340 acres of Section 1, S. A. & M. G. Survey, A-849. Wheelock & Collins' No. 1 M. L. Smith, 150 feet south and east of NW cor. of the south 40 acres of the M. L. Smith 87.25-acre tract out of Section 3, S. A. & M. G. Survey, A-850. Bush & Spinney's No. 1 J. L. Richardson, 450 feet north and 1,350 feet east of the SW cor. of the S. A. & M. G. Survey, A-1,233. Clark and others' No. 1 H. J. Guyer, 150 feet north and east of SW cor. of the H. J. Guyer 65-acre tract out of the Manuel M. Flores Survey No. 614, A-316. C. D. Gold and others' No. 1 W. M. Hooper, 1,710 feet SE of the northwest line and 3,650 feet SW of the northeast line of the Robert A. Pace Survey No. 173. Golden Rod Oil & Gas Co.'s No. 2 A. N. King, 1,500 feet south and 450 feet east of the NW cor. of the A. N. King 100-acre tract out of the Garcia-Montez & Duran Survey No. 160. Same company's No. 1 H. Hull Taylor, 650 feet SW of the northeast line and 650 feet east of the west line of the H. Hull Taylor 184.5-acre tract out of the Sarah Ford Survey No. 20, A-319. Van Bibber & Lehman's No. 1 A. C. Evans, 950 feet south and 150 feet east of the NW cor. of the A. C. Evans 106.5-acre tract out of the James Woodward Survey No. 20, A-964.

Clay County

Lone Star Gas Co.'s No. 16 I. A. Miller, 608 feet south and 1,479 feet east of the NW cor. of the S half of Section 59, Parker County school lands, A-374.

Coleman County

A. R. Forster and others' No. 1 Ruth Godwin, 150 feet south and east of the NW cor. of the Ruth Godwin 34.6-acre tract out of the G. E. H. Allen Survey.

Cooke County

Fain-McGaha Oil Corp.'s No. 1 Richard Harris, 150 feet north and 1,650 feet east of SW cor. of the R. Harris 100-acre tract out of the H. H. Davis Survey, A-1,023. Nelson Holding Co.'s No. 1 R. L. Midkiff, 150 feet south and 420 feet east of NE cor. of the Solomon Gann Survey, A-411, and located in the Bald C. Johnson Survey, A-527. Stroube & Stroube's No. 6 J. Koelzer-A, 150 feet south and west of the NE cor. of their 10-acre lease "A" out of Section 13, Thomas Scott Survey, A-900.

Crockett County

World Oil Co.'s No. 1 L. P. Powell, 2,325 feet south and 835 feet west of NE cor. of Section 52, Block BB, G. C. & S. F. Survey.

Howard County

Harrison and others' No. 3 Dora Roberts, 150 feet south and east of NW cor. of the south 20 acres of the SE of NE of Section 156, Block 29, W. & N. W. Survey. Magnolia Petroleum Co.'s No. 8 Otis Chalk, 660 feet north and east of SW cor. of Section 114, Block 29, W. & N. W. Survey.

Hudspeth County

Lockhart and others' No. 1 Moore, C of SE of Section 16, Block 71, Township 6, T. P. R. R. Survey.

Jack County

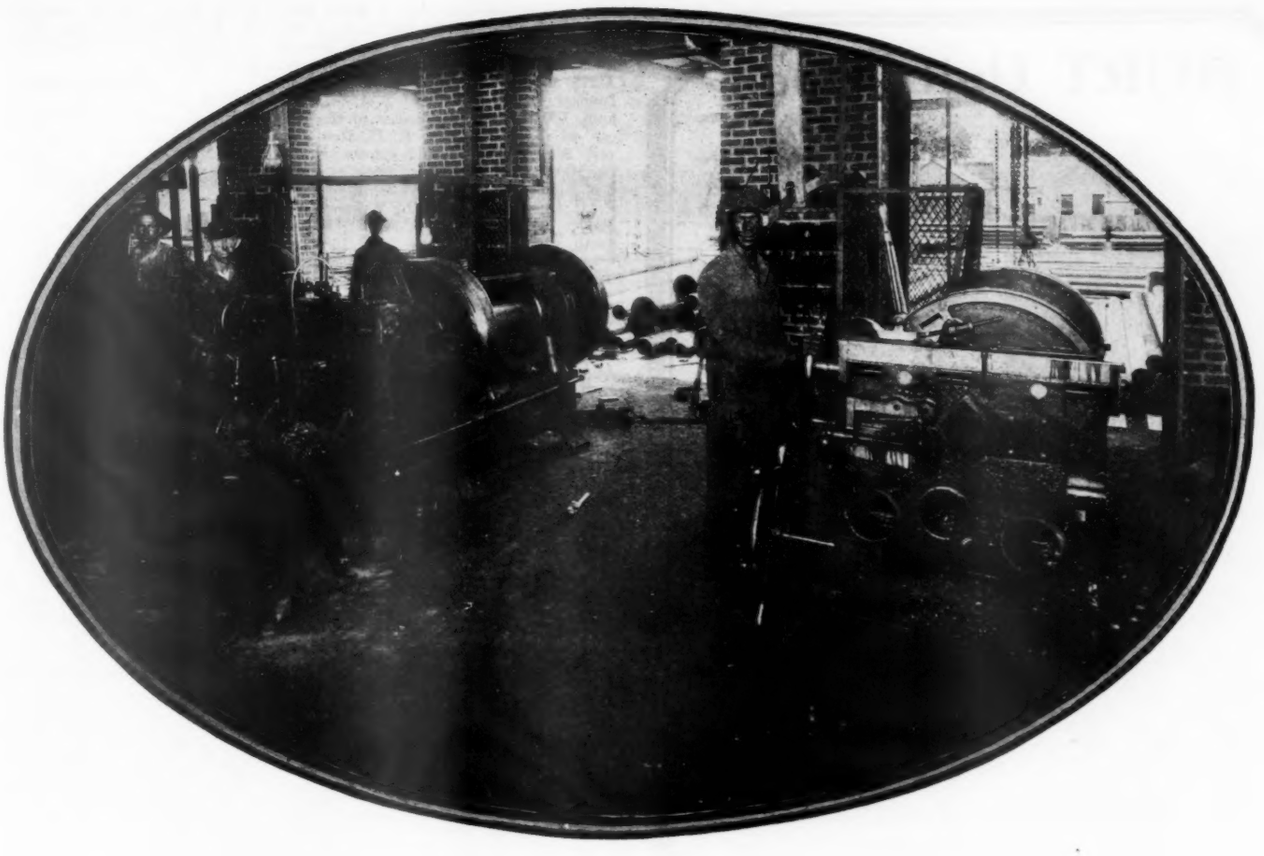
Craig, Lowrie & Walton's No. 1 Mrs. J. W. Maxey, 450 feet north and 2,020 feet east of SW cor. of Section 1, S. P. R. R. Survey, A-568. L. M. Lamar and others' No. 3 J. R. Moore, 150 feet north and 875 feet east of SW cor. of the J. R. Moore 250-acre tract out of the W. W. Brown Survey, A-2,004, and the heirs of W. Berryman Survey, A-40. Madden & Hunt's No. 1 J. R. Sloan, 150 feet south and east of the NW cor. of Section 1, J. W. Williams Survey, A-877. Madden & Hunt's No. 2 J. R. Sloan, 1,350 feet south and 1,650 feet east of the NW cor. of Section 1, J. W. Williams Survey, A-877. Texas Development Co.'s No. 1 E. L. Hodge, 1,670 feet south and 150 feet west of NE cor. of E. L. Hodge's 173-acre tract out of the M. Putman Survey, A-461.

Pecos County

Mid-Kansas Oil & Gas Co.'s No. 3 Smith-Taylor, 704 feet south and 200 feet west of the most northerly NW cor. of the I. G. Yates Survey, A-8,195 feet, and located in Section 33, Block 194, G. C. & S. F. Survey. Red Bank Oil Co.'s No. 2 Mrs. M. A. Smith, 660 feet south and 1,980 feet east of NW cor. of Section 24, Block 194, G. C. & S. F. Survey. Kirby Petroleum Co.'s No. 1 W. W. Turney, 200 feet south and east of NW cor. of SW of Section 11, Block 140, T. & St. L. R. R. Survey.

Young County

C. W. Clark and others' No. 1 M. Howell, 150 feet north and 468 feet west of SE cor. of Section 1,394, T. E. & L. Survey. N. B. Goldsmith and others' No. 1 W. H. Freeman, 450 feet south and 150 feet west of NE cor. of the S half of Section 169, T. E. & L. Survey. Eu-



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J. S. DENNIS, *Chief Commissioner*
G. G. OMMANNEY, *Development Engineer*

reka Production Co.'s No. 7 River Bed, 250 feet south and 90 feet east of the NE cor. of the Godley Oil Co.'s 40-acre lease out of the S. Tankersley Survey, A-278, and located in the Brazos River. Lindsey Drilling Co.'s No. 2 A. M. Graham, 150 feet north and east of the SW cor. of the NW of the E. H. Ros Survey, A-246. Pardee and others' No. 1 H. M. Donnell, 192 feet north and 150 feet east of SW cor. of Section 4, S. P. R. R. Survey, A-830. Westerfelt & Noble's No. 8 M. K. Graham-B, 180 feet south of the north line and 150 feet west of the east line of their "B" lease out of S. Tankersley Survey, A-278.

Runnels County

Miles Oil Co.'s No. 1 L. S. Lawhon, 300 feet south and west of NE cor. of Section 68, T. & N. O. Survey. Swensondale Oil Co.'s No. 1 E. A. Werner, 160 feet south and 1,900 feet east of NW cor. of the E. A. Werner 264.5-acre tract out of Section 160, J. H. Wilson Survey.

Throckmorton County

Parker and others' No. 3 J. A. Matthews, 250 feet south and west of NE cor. of Section 231, Block 10, E. T. R. R. Survey.

Wichita County

R. R. Clark and others' No. 4 A. A. Honaker, 1,050 feet south and 150 feet west of NE cor. of the east 100 acres of Section 11, A. B. & M. Survey, A-339. C. P. Sheldon and others' No. 2 J. M. Honaker, 150 feet north and 450 feet east of SW cor. of the James Cole Survey, A-37. C. Everts' No. 1 N. D. Cooper, 150 feet south and east of the NW cor. of Section 292, Waggoner Colony Subdivision.

Wilbarger County

Phillips Petroleum Co.'s No. 8 W. T. Waggoner-JJ, 150 feet south and 710 feet east of NW cor. of the N half of SE of Section 46, Block 4, H. & T. C. Survey.

Winkler County

Marland Oil Co.'s No. 1 Grisham-Hunter, 990 feet north and 330 feet east of the SW cor. of Section 35, Block B-5, School Lands. Same company's No. 2 Grisham-Hunter, 330 feet north and east of the SW cor. of Section 35, Block B-5, School Lands. Same company's No. 3 Grisham-Hunter, 990 feet north and east of SW cor. of Section 35, Block B-5, School Lands. Same company's No. 4 Grisham-Hunter, 330 feet north and 990 feet east of SW cor. of Section 35, Block B-5, School Lands. Murchison Oil Co. and others' No. 3 Grisham-Hunter, 2,310 feet north and 990 feet east of SW cor. of Section 35, Block B-5, School Lands. Same company's No. 4 Grisham-Hunter, 1,650 feet north and 990 feet east of SW cor. of Section 35, Block B-5, School Lands. Same company's No. 1 Grisham-Hunter-B, 1,320 feet north and 1,650 feet east of the SW cor. of Section 35, Block B-5, School Lands.

CORRECTED LOCATIONS

Archer County

W. Hammon and others' No. 2 Kemp & Kell, 75 feet north and 150 feet west SE cor. of NE NE of Section 6, S. P. R. R., A-797. Mitchan-Hart and others' No. 1 W. R. Farmer, 150 feet north and west of SE cor. of west half of Section 6, North Anderson Ranch Subdivision. Lee Wilson's No. 1 W. R. Farmer, 150 feet south and east of NW cor. of east half of the south 80 acres of the west 160 acres of Section 2, North Anderson Ranch Subdivision.

Brown County

E. L. Smith Oil Co.'s No. 8 M. L. Smith, 450 feet north and 474 feet west of SE cor. of their 60-acre lease out of Section 1, S. A. & M. G. Survey, A-849. Huber Oil Co.'s No. 6 Jesse Byrd, 1,470 feet north and 870 feet west of SE cor. of the Jesse Byrd 320-acre tract out of William B. Travis Survey No. 148, being 150 feet north and 450 feet east of the SW cor. of their 30-acre lease. Jim Curtis & Pandem Oil Corp.'s No. 1 S. H. Marr, 1,007 feet north and 790 feet east of the SW cor. of S. H. Marr 134-acre tract out of the E. L. Betts Survey No. 637, A-70.

Callahan County

Beams & Kingwood's No. 2 I. N. Jackson-B, 330 feet north and 330 feet east of SW cor. of NE of SW of Section 14, E. T. R. R. Same company's No. 3 I. N. Jackson-B, 330 feet north and west of SE cor. of NE of SW of Section 14, E. T. R. R. Survey.

Eastland County

T. J. Allworth's No. 1 J. H. Clemmer, 350 feet south and 750 feet west of the most northerly NE cor. of the J. H. Clemmer 138-acre tract out of the W. Freis Survey. C. H. Hurdleston and others No. 2 W. U. Fox, 150 feet north and 338 feet east of SW cor. of the east 49.75 acres of Section 67, McLennan County School Lands, Leagues Nos. 3 and 4. Belva Oil Co.'s No. 1 F. Good, 660 feet north and 260 feet west of SE cor. of F. Good tract out of J. R. Stubblefield Survey. Same company's No. 2 F. Good, 1,050 feet north and 300 feet west of SE cor. of F. Good tract out of J. R. Stubblefield Survey. Cranfill & Reynolds and others' No. 1 J. E. Spencer, C of SW of NE of Section 15, Block 3, H. & T. C. Survey. Independent Oil & Gas Co.'s No. 2 G. H. Snider, 330 feet north and 290 feet east of SW cor. of the east half of Section 46, Lavaca County School Land. Lowe, Delaney & Carter's No. 2 W. L. Barnett, 300 feet north and east of SW cor. of NE of SW of Section 15, Block 3, H. & T. C.

Pecos County

Mid-Kansas Oil & Gas Co.'s No. 4 I. G. Yates-B, 250 feet north and 1,156 feet east of NW cor. of Section 62, Block 1, I. & G. N. Survey.

URAL-EMBA DISTRICT

M. Korobovkin, director of the "Embaneft," in a report on the prospects of obtaining oil in the Ural-Emba district, points out that this district deserves all the attention not only because of the comparatively low cost of drilling, nor the stretches of valuable oil occurrences, but because the "Embaneft" will constitute the oil field from which the Soviet will be able to obtain its supplies should the present principal oil districts cause difficulties for some reason or other, in supplying necessary demands.

NOT GERMAN CASING

SAN ANTONIO, Tex., Oct. 1.—Mission Drilling Co.'s No. 1 Cage, in the White Point district in San Patricio County, which was brought in recently as a big well extending the field, was cased with casing made by the Youngstown Sheet & Tube Co., and handled by the Continental Supply Co. and was not imported German casing as reported at that time. The mistake arose through a misunderstanding as to terms, the casing being called, in the field, "German casing" 30-foot length and "rifle-bored."

LARGEST OIL-ENGINED SHIP

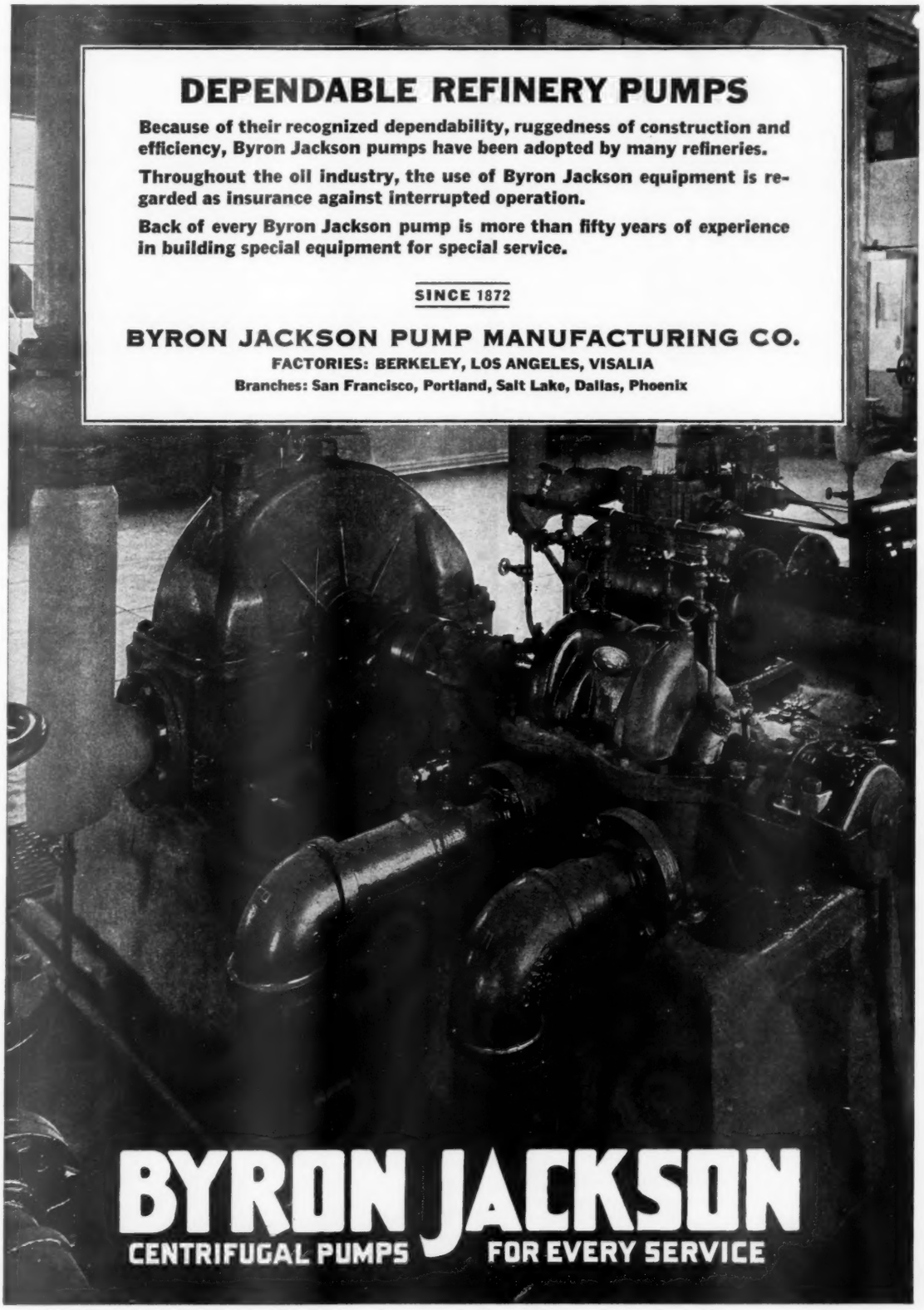
The record for possession of the world's largest oil-engined ship has passed from Britain to Italy, states the "Motor Ship." The "Saturnia," Italy's latest, has a gross tonnage of 23,940, against 22,071 of the "Asturias," Britain's largest. The new ship started on her maiden voyage from Trieste to Buenos Aires on September 21. The "Saturnia" will not hold the record for long. She will be followed in November by the "Augustus," another Italian vessel, with a tonnage of nearly 33,000.

TO DECONTROL PETROLEUM

According to the Anglo-International Bank, Ltd., the Administration of Monopolies of Jugo-Slavia has decided to decontrol petroleum. The trade in this commodity will in the future be carried on by private individuals against payment of a monopoly tax. It is reported that the reservoirs existing in Belgrade have recently been up for sale.

ARGENTINE NATIONALIZES OIL

Advices from Buenos Aires state that the Argentine Chamber of Deputies approved the nationalization of the country's petroleum fields by 71 votes. These are to be exploited jointly by the State and private enterprises.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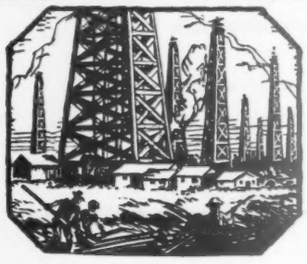

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Read The Oil and Gas Journal every week.

It will keep you reliably informed and provide you with information not obtainable elsewhere.

VARIED USES OF NAPHTHA IN SPECIFICATIONS

(Continued from Page 148)

quence, the price paid per gallon is usually higher than that received for gasoline.

The use of naphtha by the paint, rubber, vegetable oil and cleaning industries shows that other industries besides the automotive industry have discovered the value of petroleum products.

TABLE OF NAPHTHA SPECIFICATIONS

Product—	White Spirits or Turpentine Substitute	Com'cial	Mineral Spirits or Turp'tine Substitute	Rubber Solvent	Cleaners' Naphtha	Nat'al Gaso. Manuf'ers' Naphtha
Gravity	44.7	31.7	48.0	....	49.5	48.8
I. B. P.	311	303	288	124	280	236
10 per cent distilled	316	306	320	152	302	298
20 per cent distilled	321	310	328	162	314	312
30 per cent distilled	324	310	337	172	320	322
40 per cent distilled	328	310	344	182	324	336
50 per cent distilled	329	310	349	190	330	346
60 per cent distilled	330	310	356	200	338	360
70 per cent distilled	332	312	362	211	342	370
80 per cent distilled	338	314	370	223	350	386
90 per cent distilled	347	318	380	245	360	408
Maximum	364	346	412	305	400	448
Flash (Tag. closed)	...	91	90	...	...	...

Table showing results of tests of a few naphthas, also a comparison with the tests of a commercial turpentine.

NEW OIL FIND IN POLAND

Large oil wells have been struck at Wenglowka, Poland, on the estate of General Szeptycki, according to advices received from Warsaw. One well alone was said to be producing 12 railroad tanks of oil daily. The general opinion was that the new wells would become another Boryslav, the largest oil field in Poland.

EMPLOYES' INVENTION AGREEMENT OF THE ASSOCIATED OIL COMPANY

(Continued from Page 150)

the working committee and is subject to change at the latter's pleasure.

Following is a copy of the Employe's Invention Agreement:

THIS AGREEMENT, made and entered into this ..... day of ....., 192.., by and between Associated Oil Co., a California corporation, first party, hereinafter called "Company," and of ..... second party, hereinafter called "Employe."

WITNESSETH:

THAT WHEREAS, Company is engaged in the petroleum business, and

WHEREAS, Employe is employed by Company and has the opportunity of using Company's tools, appliances and facilities, and is desirous of continuing said employment.

NOW, THEREFORE, in consideration of the premises and of said employment and the salary paid therefor, the parties hereto do hereby agree as follows:

1. Employe agrees, while in the employ of Company, to use his best endeavors and skill in the art or work in which he is especially trained and for which he is employed, in perfecting and devising any methods, apparatus, articles or substances pertaining to the work or business of Company or any business closely allied thereto.

2. Employe agrees to fully disclose to Company, its duly accredited agents or assigns, any new and useful art machine, manufacture, composition of matter, method, process or appliance, or any new and useful improvement thereof, which he has devised, invented or discovered since his employment by Company, or which he may hereafter devise, invent or discover, either solely or in collaboration with others, during his time of employment with Company, and further agrees without further consideration than as herein set forth to execute applications thereon, including all inventions, both original and reissue, for patents both in the United States and elsewhere together with proper assignments conveying the entire right, title and interest thereto to Company, or its assigns, it being understood, however, that all expense incident to the preparation, prosecution and filing of such applications and assignments shall be borne by Company.

3. For the considerations herein expressed and in that it may be necessary for Company to communicate to Employe confidential information regarding its manufacturing methods, products, contemplated developments and proposed research and experiment, in order that he may properly perform for Company those services for which he has been employed, Employe hereby further agrees to fully disclose to Company for a period of eighteen months after the termination of his actual employment by Company, either by act of Company or by his own act or resignation, any and all inventions which he may conceive or devise during such eighteen months' period, either solely or jointly with others, appertaining to apparatus, processes or products applicable to Company's business, or any business closely allied thereto, and to execute and assign to Company any and all applications, both original and reissue, necessary to the full protection of said inventions, both in the United States and elsewhere.

Company agrees to execute a release of all rights under the preceding paragraph, if at termination of employment Employe presents all data pertaining to inventions initiated by him during employment and satisfactory proof that he has disclosed to Company all other inventions and patentable ideas, except that such release shall not apply to any patents on improvements covering inventions or patents already assigned to the Company, or to any patents obtained subsequent to termination of employment on inventions, ideas or data initiated during employment.

4. If Company elects not to apply for Letters Patent on any such inventions of Employe, Company shall thereupon have no further rights thereto except the right on its part and on the part of its subsidiary and affiliated companies to make and use same without charge or royalty.

5. Employe agrees to testify on Company's request in any interference proceeding or suit which may arise in connection with his sole or joint inventions, and to do or cause to be done, any and all acts which may be deemed necessary to the full protection of said inventions, any expense attendant upon such interference proceedings or suits to be borne by Company, or its assigns; and Company agrees to reimburse Employe for any expense incident to giving testimony after termination Employe's employment by Company and to pay at the rate of Forty Dollars ($40) per day for time actually given by Employe while attending taking of testimony after termination of his employment.

6. Employe further agrees, during his employment and after termination thereof, not to divulge to any third party any information, confidential or otherwise, obtained by him while in Company's employment, relating to the business of Company or any of its apparatus, processes or products, and upon termination of employment, to turn over to Company all notes, memoranda, note-books and records in connection with inventions, as such property, together with all information contained therein, is at all times property of the Company.

7. For the considerations herein named and as a means to further stimulate other inventions, Company agrees to award Employe twenty-five (25) per cent of the net income derived from licenses and royalties under Employe's patents (it being understood that Company is not to pay any royalties) provided that should Company elect to retain patent rights exclusively covering any invention, then in lieu of said twenty-five (25) per cent payments, Company shall pay Employe an amount to be mutually agreed upon by the parties, or in the event that the parties cannot agree, then to be determined by three arbitrators, one to be chosen by the Company, one by Employe and the third by the two so chosen, and their decision as to the amount of said payment shall be final and binding upon the parties and Company shall pay same to Employe unless Company then elects not to retain exclusive rights, in which latter event Employe shall receive twenty-five (25) per cent of the net income as first hereinabove set forth. Said payment, whether agreed upon by the parties or by arbitration, shall be made in equal monthly installments over a period of five (5) years, payments to be withheld if during said five-year period patent involved is litigated, and Company to be released from further payments if at any time the patent involved is declared by court of competent jurisdiction invalid or to be an infringement, or if in any other way exclusive rights under said patent are limited. If by reason of any patent being covered by joint invention or otherwise, anyone other than Employe is entitled to share in said payments, the total amount to be paid by Company as hereinabove set forth shall not thereby be increased, but said payments shall be made by Company to a single depository to be distributed by such depository to the persons entitled thereto, and payment by Company to such depository shall release Company from further obligations.

8. This Agreement shall inure to the benefit of and be binding upon Associated Oil Co. and all companies, partnerships or associations which are now or may hereafter become subsidiaries of, or affiliated with, Associated Oil Co. and their respective successors and assigns, and Employe, his heirs, executors, administrators and assigns.

IN WITNESS WHEREOF, the parties have executed the same the day and year first above written.

ASSOCIATED OIL COMPANY,
By ..... Vice President
And ..... Assistant Sec., First Party
..... Second Party

Witness:
.....
.....

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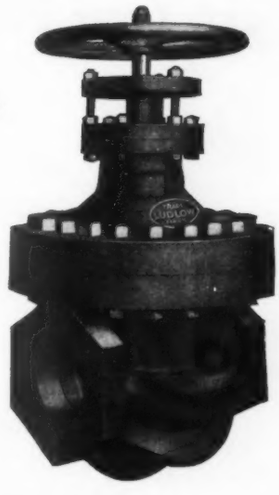

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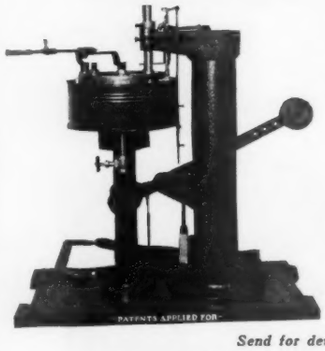

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MEXICAN REPRESENTATIVE DEFENDS GOVERNMENT'S PETROLEUM POLICY

By Manuel J. Zevada*
Mexican Department of Industry, Commerce and Labor

There are certain characteristics and special features in the petroleum industry of Mexico which it is of interest for the American public to know, since Mexico is the second oil-producing country in the world, and the greater part of its production is exported to the United States, thereby affecting to a considerable extent the market of this country.

The study of these features of the Mexican petroleum industry is important, as well as that of the regulations governing the exploitation of oil fields in Mexico, at the present time, when the petroleum world is deeply interested in the work tending to the conservation of American petroleum resources, which is being carried on by the Federal Oil Conservation Board, and when the statements of Secretary of the Interior Hubert Work inform us that the Government of Washington is in favor of the enactment of laws to protect the oil deposits against waste in production, and the public against future high prices for oil products.

As a representative of the Department of Industry, Commerce and Labor of the United Mexican States, I shall outline briefly the characteristics of the Mexican petroleum industry, and of the laws now in force on petroleum, in which there has been considered, principally, the conservation of oil resources, endeavoring at the same time to stop the waste of gas and oil in the exploitation of the oil fields.

The total production obtained in Mexican oil fields from 1901 to June, 1927, reaches the enormous figure of 1,434,810,591 bbls. (near a million and a half.)

This enormous production has been obtained from a very reduced area; about 15,000 acres, and this constitutes another distinctive feature of the Mexican oil industry.

Potential Acreage

By the geological exploration work carried out, it is estimated that the possible oil-producing lands in Mexico cover an area of not less than 150,000,000 acres, being distributed in the following zones:

Large tracts of land in the northern frontier, which are bounded by the producing region of southern Texas; the greater part of our Gulf Coast, in a belt 70 miles wide, excepting the northern plateau of the State of Yucatan; the western part of Lower California is also considered as a possible oil territory and other sections of the States of Sonora, Sinaloa, Nayarit, Oaxaca and Chiapas, along the Pacific Coast.

The fact that only a small fraction of our petroleum lands has been exploited and the enormous potentiality of the wells causes production in Mexico to be subject to great fluctuations, which must eventually affect the development of the industry. These fluctuations are also found in other countries, where the area operated is very large, when the discoveries of new wells are scarce.

Compared With United States

As an illustration, we may mention the following example:

In May, 1925, the daily oil production of the United States was 2,348,000 bbls. In February, 1926, it was only 1,916,000 bbls. Thus, over a period of eight months, there was a steady decline amounting to 432,000 bbls., or at the annual rate of 27.6 per cent. During that period of eight months the oil companies were not inactive in their attempt to make new discoveries in the enormous extension of possible oil lands, existing in this country. In Mexico, we had a decrease in production of 21 per cent, from 1925 to 1926, a fact which is not surprising if it is borne in mind that the exploration work carried out for the location of new fields was circumscribed to a very reduced area.

Another characteristic feature of the Mexican petroleum industry consists in the fact that only a small portion of the production is consumed in the country, as the greater part is exported to the United States; 70 per cent of the total exports goes to the United States, 15 per cent to Europe and the rest to Central America, South America, the West Indies, Africa and Asia.

Of the oil production obtained in 1926, amounting to 90,420,973 bbls., only 14,504,381 bbls. of crude petroleum and oil products were destined to domestic use, with the circumstance that during the same year there were imported 1,221,323 bbls. of crude petroleum and refined oil products principally for the consumption of the northwestern part of our country.

The features outlined place the Mexican oil industry in a special position in the petroleum world, which must be taken into consideration in judging the material and legal conditions constituting the basis of its present development, and which may influence its future in a great degree.

Mexican Petroleum Law

The fundamentals of the Mexican petroleum law are contained in the mining legislation which for more than 300 years was in force during the Spanish dominion, and continued for nearly 100 years after independence. It is not surprising that the laws dictated by the Spanish Crown should have considered the exploitation of petroleum deposits, since the existence of oil was known from the remotest times in our country, and the rudimentary exploitation of the oil seepages (chapopoteras) was practiced by the natives, who used the products so obtained for lighting purposes, or used the crude petroleum as incense in religious ceremonies and as mortar in the construction of their buildings.

The word "chapopote," Indian for oil, derived from two terms of the Nahoa language; "Tzauc" which means paste or cement, and "Popochtli," meaning perfume, indicates the principal uses to which petroleum was destined.

In drawing up the petroleum law, which was enforced in accordance with Article 27 of the Constitution, the legislators introduced no innovation, but continued a legal tradition sanctioned by near 400 years of application, in virtue of which, the direct dominion over petroleum deposits belonged to the sovereign, and later it was vested on the nation, when Mexico became a sovereign state, under the form of an independent republic.

The application of these principles was interrupted, during the period from November 22, 1884, to May 1, 1917, when the present constitution was promulgated, and during that period, divers laws were put into effect which improperly broke the usages and customs of several centuries.

Oil in the Constitution

The constitution of 1917, in obedience to those traditional principles of our legislation, restored for the nation the direct dominion on petroleum and the natural hydrocarbons found with same in the subsoil, and established upon definite basis, the right of Mexicans and of Mexican corporations to obtain concessions authorizing them to exploit and utilize such petroleum, also authorinzing aliens to obtain such concessions, provided they agreed to consider themselves as Mexicans, in so far as concerns the rights granted by such concessions.

The petroleum law of December 31, 1925, specifies the requirements that have to be met in order to obtain such concessions, and clearly determines that they may be granted only upon free land, considering as such, all land not affected by any right recognized by the same law and acquired prior to the date of application for the concession.

In like manner, by means of confirmatory concessions, the petroleum law re-

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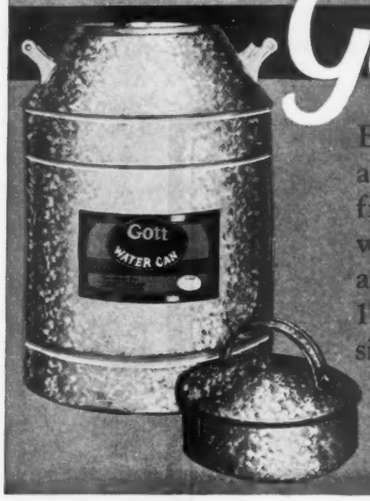

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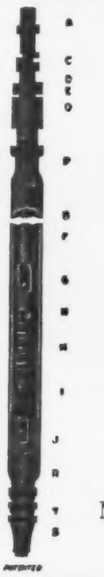

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spects all rights acquired prior to May 1, 1917, in conformity with the principle of nonretroactivity established by our Magna Charta, and by means of preferential concessions, it confirms the rights acquired between May 1, 1917, and December 31, 1925, when the law regulating Article 27 of the constitution in the matter of petroleum was enacted.

Advantages of Law

From the standpoint of the exploitation of Mexico's petroleum resources, and the facilities which it grants for the development of the industry, the petroleum law presents the following advantages:

1. The petroleum industry has been declared as being under Federal jurisdiction and therefore, legislation on petroleum is uniform and its application concerns a single branch of the Federal Government.

2. The spirit of this law is that of conservation and better utilization of petroleum resources, and one of the main objects sought by its provisions and regulations is that the development of the industry may be carried out without departing from the principles established by technical progress and science, so that the country may obtain from this source of natural wealth a maximum of benefit, to be derived from the maximum profits to be earned by the capital invested.

3. Concessions granted by the Government constitute titles, in virtue of which, concessionaires need not worry about perfecting and legalizing lengthy series of documents covering property rights, whose transmission is very deficient, in the majority of cases, and gives rise to claims and suits before the courts, that are prolonged for long periods, originating expenses to the companies and being the cause of insecurity for investments.

Conservation Policy

From the standpoint of the conservation of the pools and of the best utilization of petroleum resources, the Mexican law presents the advantages mentioned herein below:

1. It allows the unit operation of pools as advocated by some of the leading representatives of the American petroleum industry. To illustrate the application of this principle we may mention the case of the exploitation of the "Chapacao" Pool, under single management, which is being carried out, jointly by the Huasteca Petroleum Co. and the control of the National Petroleum Administration.

Unit operation was agreed upon after both companies had been drilling in competition for a period of several months, after which they reached the conclusion that it was more expedient both for their interests, and for the conservation and better utilization of the pool, to adopt with the approval and support of the Federal Government, the unit operation plan, which has produced highly satisfactory results.

2. The regulations for petroleum operation are of general application throughout the whole country, and the chief aims of the provisions contained therein are to avoid the waste of gas and oil in exploitation, to guarantee the health and security of workmen employed in the industry, by reducing accidents, fires, etc., to a minimum, and to endeavor to attain the best utilization of the Mexican oil resources.

Mexican View

A simple comparison between the past and the present of our oil industry, fully justifies the action of the Mexican Government which, far from interfering with the industry has brought about its reasonable development and has caused its advance until it has reached the high level of efficiency where it now stands.

The majority of the petroleum enterprises operating in Mexico have recognized the great advantages of the Mexican petroleum law, and the practical expediency of the concession system established by our legislation, as is demonstrated by the following official data:

Of 147 enterprises registered in the Bureau of Petroleum, 125 have accepted our petroleum legislation. Of the remaining 22, some have adopted a two-

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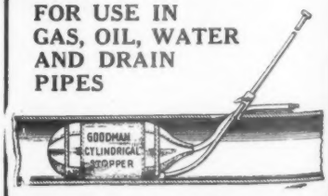

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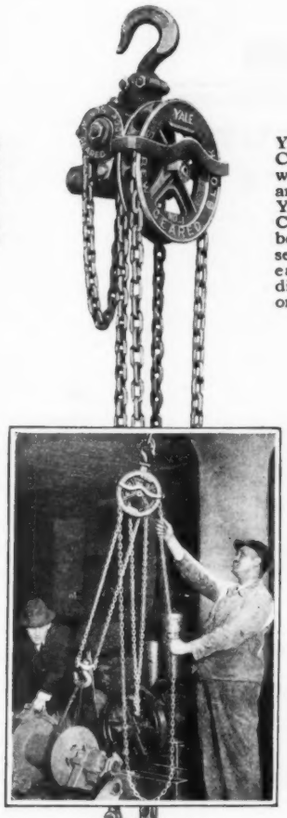

2

Yale Screw-geared Chain Block For portable use. Light, powerful, takes up less head room. A pull of 87 lbs. on hand chain lifts a 1 ton load.

3

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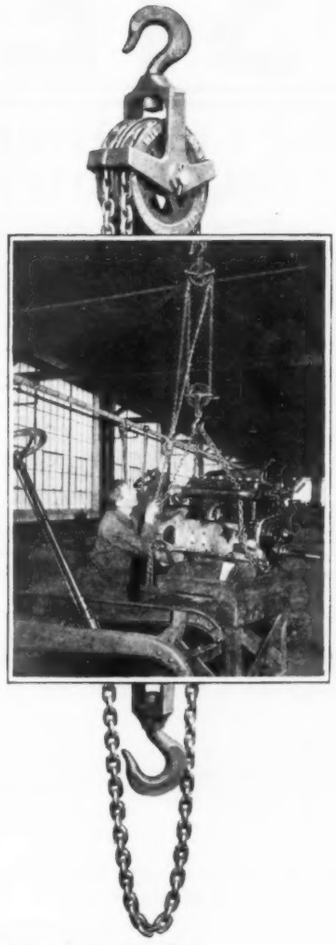

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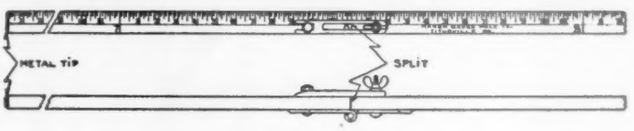

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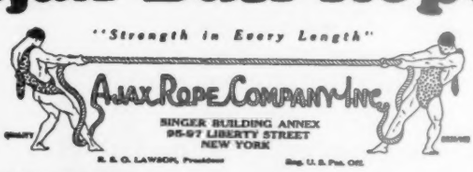

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Ajax ropes are carried in stock by the North Texas Supply Co., Cross Plains, Tex.; Rex Supply Co., Sour Lake, Tex., and Mid-Continent Supply Co., Fort Worth, Tex.

fold attitude as regards the petroleum law, since they have applied for concessions, in accordance with the law for some of their lands and not for others.

The lands upon which the companies have failed to apply for confirmatory concessions cover an area of 1,660,312 acres only; on the other hand, the lands for which confirmatory concessions have been applied for, cover a surface of 26,880,000 acres. Furthermore, in conformity with the law, 9,351,562 acres have been applied for under preferential concessions, and under ordinary concessions up to May 31 of the present year, an area of over 26,400,000 acres has been applied for.

If it is considered that the area of lands recognized as possible oil-producing territory amounts to approximately 150,000,000 acres, on 62,631,562 acres of which concessions have been applied for under the new law, it may be easily understood that the petroleum companies find that the situation in which they are placed by the Mexican law is to their advantage, and the great majority have accepted same.

Proportion of Drilling

Towards the end of 1926 the oil production from wells drilled on lands not applied for under concessions, amounted to 52.7 per cent of the total production, but this proportion must rapidly diminish, as and when the lands on which concessions have been applied for, come under operation, and these lands as has been shown, cover an area 38 times greater than that of the lands without the law.

In the case of certain companies, such as "El Aguila" and the "Transcontinental" who have complied with the law in respect of a portion of their properties, the greater part of their production is obtained from lands that they have placed under the law.

Investments made in the Mexican petroleum industry prior to 1917 amounted to $182,752,699 Mexican currency, while, on the other hand, the amount invested since the present constitution has been in force up to the middle of the current year, is $693,778,541 Mexican currency. Prior to 1927, 279 wells had been drilled in our country, of which 147 proved to be productive, with a total yield of 166,789,702 bbls.; per contra, as from 1917, since when all drilling permits have been granted subject to the provisions of our constitution and to the requirements later prescribed by its regulations, up to June of the current year, there has been drilled 4,010 wells, of which 1,847 proved to be productive, there having been extracted from them during that period 1,268,020,889 bbls.

Prior to 1917 there had been exported 105,365,480 bbls.; after 1917 and up to June of the present year, there have been exported 1,141,507,828 bbls.

Defends New Law

The facts mentioned show unmistakeably that the marvelous development of the Mexican petroleum industry was achieved under the protection of the legal provisions contained in our constitution of 1917.

The law on petroleum, which regulates the above provisions of the constitution, is inspired in the principle of conservation and better utilization of Mexico's oil resources, and in drawing it up, it was borne in mind that the advantages of a general nature to be derived from the exploitation of this source of wealth are more important, for the future of the nation, than any individual benefits of a transitory nature, that some few companies might obtain.

Consistently with this criterion, the Mexican law has taken into account the interests of large and small producers, as well as those of the consuming public, holding that the development and future success of the oil industry as a whole is of greater significance to the public in general, than the fluctuations of production recorded in a single year, whether due to the policy adopted by some companies or to any special conditions characteristic of the Mexican oil industry.

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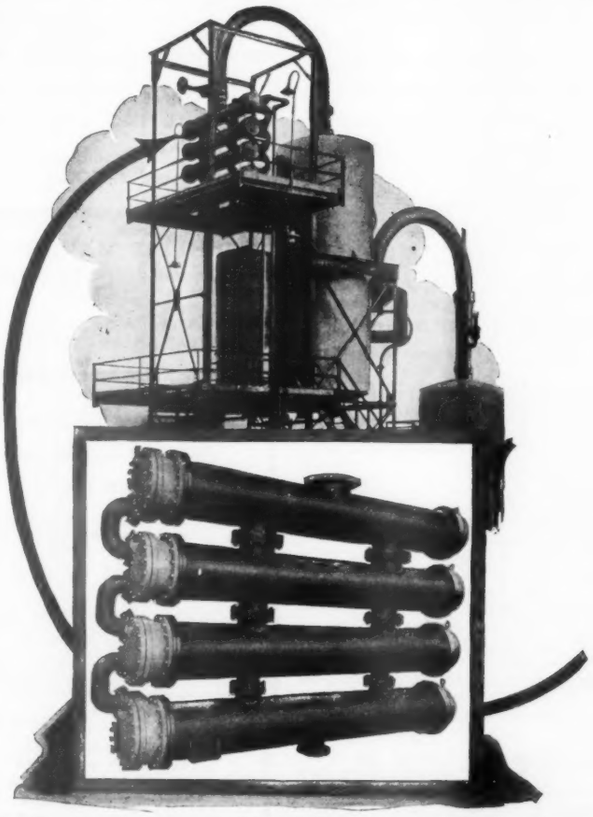
The G-R Sectional Condenser



The sectional arrangement of this condenser provides many special operating advantages. Sections can be added to or removed to meet varying capacity requirements. The complete unit is readily transported and re-assembled if necessary to meet changing plant conditions. Inspection and cleaning are greatly facilitated.

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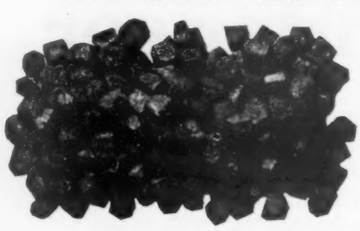
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NEW SYSTEM PROPOSED FOR AIR OR GAS LIFT

(Continued from Page 68)

contact breaker similar to the ones used on block signals and constructed so it is possible to pump any well in the unit as often or as long as desired by the spacing of the contacts. There is a small motor-controlled valve at each well which opens a port similar to a steam engine allowing the gas to operate the valve plunger.

On a system of 20 wells only one well will be pumped at a time, while the

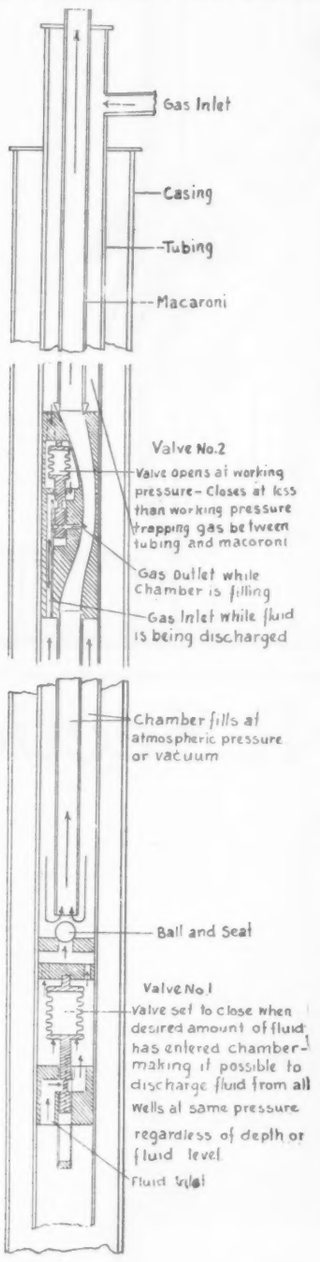
Gas Inlet
Casing
Tubing
Macaroni
Valve No.2
Valve opens at working pressure – Closes at less than working pressure trapping gas between tubing and macaroni
Gas Outlet while Chamber is filling
Gas Inlet while fluid is being discharged
Chamber fills at atmospheric pressure or vacuum
Ball and Seat
Valve No.1
Valve set to close when desired amount of fluid has entered chamber making it possible to discharge fluid from all wells at same pressure regardless of depth or fluid level
Fluid Inlet

Fig 1

other 19 are filling. As the valve on one well is closed the next one is opened, allowing the compressor to work at a constant pressure. Vacuum can be used either through the casing or macaroni.

The lower control valve will also be built to be used on blowing wells under the old system. This will enable the operator to start the wells blowing without the aid of the high stage compressors. It will be necessary to use one packer with this system unless macaroni is used.

This system was invented by M. P. Burke and pending patents cover both the method and the means. Experiments are being carried on at the present time in California.

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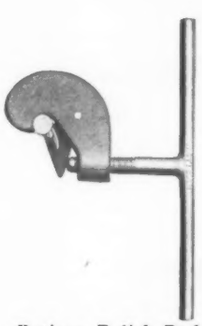

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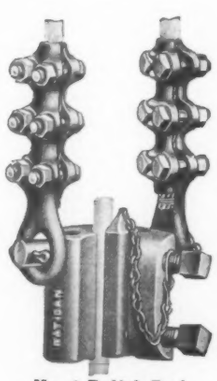

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OKLAHOMA-KANSAS

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Runs

Company—	Month	Daily Av.
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Gulf Pipe Line Co.	1,329,776	42,896
Texas P. L. Co.	1,124,792	36,286
Empire P. L. Co.	2,273,993	73,355
Magnolia Petr. Co.	1,576,078	50,841
Cosden P. L. Co.	1,238,164	39,941
Sinclair P. L. Co.	3,029,227	97,717
Oklahoma P. L. Co.	3,819,659	123,215
*Other lines	10,974,000	354,000
Total July	29,961,189	966,751
Total June	26,264,739	875,824
Difference	3,696,450	90,927

Shipments

Company—	Month	Daily Av.
*Prairie P. L. Co.	5,788,133	186,714
Gulf P. L. Co.	1,131,314	36,494
Texas P. L. Co.	892,467	28,789
Empire P. L. Co.	1,702,274	54,912
Magnolia Petr. Co.	1,397,870	45,093
Cosden P. L. Co.	1,132,181	36,522
†Sinclair P. L. Co.	2,902,778	93,638
Oklahoma P. L. Co.	3,908,856	126,092
*Other lines	8,587,000	277,000
Total July	27,442,873	885,253
Total June	25,273,132	842,437
Difference	2,169,741	42,816

Stocks

*Prairie O. & G. Co.	30,250,000
Prairie P. L. Co.	2,000,000
Gulf P. L. Co.	8,780,459
Texas P. L. Co.	4,846,951
Empire P. L. Co.	3,849,034
Magnolia Petr. Co.	5,744,633
Cosden P. L. Co.	3,032,971
*Sinclair Crude Oil Pur. Co.	19,700,000
Oklahoma P. L. Co.	2,191,361
Carter Oil Co.	15,746,013
*Other lines	10,000,000
Total July	106,141,422
Total June	103,378,545
Difference	2,762,877

*Estimated. †Prairie Pipe line shipments include Texas crude oil and Sinclair Pipe line shipments include Texas and Wyoming crude oil.

Note—Stocks do not include approximately 5,000,000 bbls. of crude oil held in storage in private tank farms and leases and approximately 1,850,000 of Texas Panhandle crude oil in storage in Oklahoma and Kansas.

EASTERN PIPE LINES

Runs from Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for July and August:

	July, '27	Aug. '27
Nat. Transit	155,782.70	146,479.36
S. W. Pa. P. L.	85,622.93	86,548.23
Eureka P. L.	378,082.34	395,237.23
Buckeye P. L. (Macksburg)	319,986.23	343,331.35
Buckeye P. L. (Cleve)	11,219.55	11,953.23
Buckeye P. L. (Lima, etc.)	126,613.83	129,837.26
Indiana P. L.	9,105.05	8,905.59
Cum'land P. L.	261,877.90	267,515.04
N. Y. Transit	22,074.98	25,028.15
Tidewater P. L.	185,203.73	197,502.70
Pure Oil	157,734.23	164,866.70
Emery P. L.	54,627.01	59,569.14
Paragon Dev.	28,004.42	30,553.65
Pgh. P. L.	5,520.99	4,824.41
Stoll Oil Ref.	14,258.01	14,831.15
Total	1,815,803.91	1,886,983.19
Daily average	58,574.32	60,870.42

Note—Indian Refining Co. also reported other receipts of 415,944.89 bbls. Paragon Refining Co. had other receipts of 175,142.86 bbls. Paragon Development had other receipts of 818.77 bbls. Pure Oil had other receipts of 25,375.12 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for July and August:

	July, '27	Aug. '27
Nat. Transit	330,044.32	344,779.78
S. W. Pa. P. L.	363,850.84	343,310.98
Eureka P. L.	183,351.51	198,755.14
Buckeye P. L. (Macksburg)	175,567.01	153,543.57
Buckeye P. L. (Cleve)	971.94	727.43
Buckeye P. L. (Lima, etc.)	954,040.89	748,093.86
Indiana P. L.	1,038,598.35	868,709.30
Cum'land P. L.	139,659.15	150,233.42
N. Y. Transit	364,628.63	289,844.19
Northern P. L.	200,019.17	196,331.58
Tidewater P. L.	106,016.04	150,113.65
Pure Oil	165,167.59	205,913.45
Emery P. L.	57,048.51	54,557.31
Paragon Ref.	176,876.31	177,675.03
Indian Ref.	400,446.10	379,066.52
Paragon Dev.	29,982.32	31,192.30
Pgh. P. L.	5,593.34	5,395.27
Total	4,691,862.02	4,298,243.43
Daily Average	151,350.39	138,653.01

Gross Stocks

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky, at the close of July and August:

	July, '27	Aug. '27
Nat. Transit	1,137,052.50	1,129,180.77
S. W. Pa. P. L.	684,337.22	683,536.32
Eureka P. L.	1,859,908.44	1,949,986.99
Buckeye P. L. (Macksburg)	407,391.62	416,688.27
Buckeye P. L. Cleve.)	36,605.62	39,918.38
Buckeye P. L. (Lima, etc.)	4,280,952.96	4,668,115.54
Indiana P. L.	618,014.38	620,873.22
Cum'land P. L.	579,849.28	591,843.81
Southern P. L.	433,210.34	429,471.58
N. Y. Transit	419,558.02	460,922.97
Northern P. L.	487,732.61	470,103.63
Pure Oil	412,670.10	395,429.71
Emery Pipe	7,901.54	13,506.50
Paragon Ref.	18,557.87	15,636.20
Indian Ref.	58,707.96	93,156.64
Paragon Dev.	6,514.28	6,821.39
Pgh. P. L.	4,163.23	3,864.26
Total	11,453,127.97	11,989,115.18
Decrease	40,545.24	
Increase		535,987.21

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern pipe lines at the close of July and August showing the gross stocks of the above fields:

	July, '27	Aug. '27
Penna.	4,190,178.95	4,238,474.19
Lima	1,006,906.85	1,018,062.71
Kentucky	1,129,805.76	1,134,629.10
Mid-Cont.	5,079,649.41	5,531,964.28
Illinois	46,587.00	65,984.90
Total	11,453,127.97	11,910,115.18

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1924	1925	1926	1927
Jan.	62,638	56,831	55,630	56,209
Feb.	68,023	60,606	60,394	61,298
March	68,721	60,575	61,644	63,247
April	71,058	63,062	63,019	60,337
May	63,942	59,217	60,580	60,284
June	63,230	61,270	64,131	62,757
July	64,208	62,639	63,206	58,574
Aug.	59,942	59,686	61,815	60,870
Sept.	62,930	62,510	64,639	.....
Oct.	64,976	60,995	62,704	.....
Nov.	56,282	59,350	61,774	.....
Dec.	55,814	57,974	58,755	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1924	1925	1926	1927
Jan.	145,518	157,889	156,056	141,227
Feb.	148,732	160,863	159,483	138,534
March	147,098	154,591	150,239	133,777
April	147,611	151,429	152,371	140,227
May	134,997	146,995	160,998	144,894
June	143,010	149,467	160,257	149,772
July	124,187	161,338	160,245	151,350
Aug.	123,120	161,730	151,929	138,653
Sept.	127,325	156,719	158,915	.....
Oct.	123,170	145,388	161,132	.....
Nov.	124,400	143,582	152,668	.....
Dec.	151,392	150,162	136,428	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1925	1926	1927
Jan.	11,353,276	9,859,170	9,718,048
Feb.	11,192,924	9,579,364	10,119,183
March	11,158,297	9,438,292	10,794,044
Apri	11,062,082	9,805,851	11,112,395
May	11,207,562	9,531,757	11,359,381
June	11,093,796	9,585,904	11,492,673
July	11,067,453	9,734,687	11,452,123
Aug.	10,974,481	9,668,947	11,989,115
Sept.	10,781,753	9,432,732	.....
Oct.	11,086,850	9,269,806	.....
Nov.	11,068,158	9,257,667	.....
Dec.	10,458,445	9,454,512	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above.

1926—	Runs	Shipments	Stocks
July	3,025.86	4,075.11	13,603.13
August	2,886.59	2,121.21	14,574.56
Sept.	2,788.18	3,373.06	13,995.68
Oct.	2,991.86	2,307.75	14,671.21
Nov.	2,810.60	1,664.55	15,817.31
Dec.	2,847.52	5,561.11	13,103.73
1927—			
Jan.	2,641.54	1,470.42	14,274.84
Feb.	2,764.30	1,082.82	15,956.32
March	2,587.20	1,878.56	16,664.96
April	2,834.23	1,512.65	17,986.54
May	2,768.47	539.29	20,215.72
June	2,946.29	664.40	22,497.61
July	3,153.39	1,276.61	24,374.39

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Runs from wells	621,398.35
Gross stocks, Sept. 1	2,110,156.79
Other receipts	360,647.28
Regular deliveries	500,694.73
Other deliveries	377,457.79

The amount of Illinois oil run by the Tide Water Pipe Co. in August was 29,878.15 bbls. and deliveries were 28,726.64 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1926—	Runs	Deliveries
July	713,490.66	490,092.81
August	701,795.92	555,766.59
Sept.	688,798.66	516,083.65
Oct.	681,648.96	531,467.39
Nov.	651,263.33	493,433.37
Dec.	668,909.58	537,947.61
1927—	Runs	Deliveries
January	621,421.03	520,085.96
February	595,831.16	476,956.71
March	727,593.91	554,947.43
April	593,225.97	444,818.49
May	728,759.40	543,192.02
June	640,975.85	532,217.75
July	613,901.30	484,902.53
August	651,276.40	529,331.37

Tide Water Pipe Co., Ltd., also delivered in August, 127,490.55 bbls. of Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
March	16,616	5,484	56,710	13,871	13,419	106,097	.....	.....	.....	484	.....	106,581
April	12,667	4,367	47,667	15,100	13,300	93,100	.....	.....	.....	.....	.....	93,100
May	10,452	7,645	18,387	9,226	6,226	51,935	.....	.....	.....	.....	.....	51,935
June	25,567	11,233	48,833	17,367	17,367	120,367	.....	.....	.....	.....	.....	120,367
July	13,484	17,290	33,065	9,129	5,451	78,419	.....	.....	.....	.....	968	79,387

AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	All Ports
March	4,677	13,161	63,484	9,226	26,129	116,677	6,742	36,258	2,419	4,871	50,290	166,967
April	22,700	9,033	62,033	6,067	26,567	126,400	5,067	18,033	.....	.....	23,100	149,500
May	21,032	9,807	93,452	7,774	23,580	155,645	1,807	30,612	1,936	.....	34,355	190,000
June	18,167	9,700	83,867	10,900	16,567	139,200	2,000	31,800	.....	.....	33,800	173,000
July	22,226	10,387	80,193	7,193	28,710	158,710	3,226	25,065	806	.....	29,096	187,806

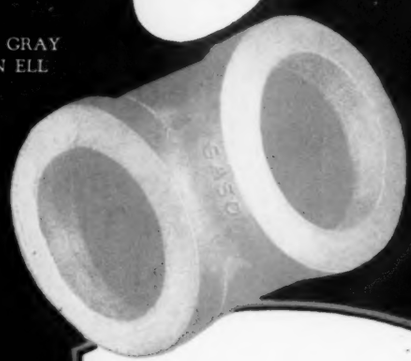
GROSS PRODUCTION OF THE UNITED STATES FOR 12 MONTHS

(IN BARRELS)

1926—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mountains	Eastern Fields	Total
August:	Month	18,765,080	14,618,236	17,093,586	3,681,436	4,878,191	2,190,739	3,457,697	3,339,500	68,024,465
	Daily average	605,325	471,556	551,406	118,756	157,361	73,896	111,538	107,726	2,194,333
September:	Month	18,104,954	14,466,510	17,580,100	3,450,060	4,603,230	2,079,840	3,141,123	3,330,000	66,755,817
	Daily average	603,498	482,217	586,003	115,002	153,441	69,328	104,704	111,000	2,225,194
October:	Month	18,966,058	15,720,689	19,001,388	3,714,637	4,626,138	2,166,559	3,071,720	3,398,000	70,664,189
	Daily average	611,808	507,119	612,948	119,827	149,198	69,889	99,088	109,613	2,279,490
November:	Month	19,173,128	16,876,950	18,593,160	3,593,490	4,299,480	2,054,911	2,842,587	3,216,000	70,649,706
	Daily average	639,104	562,565	619,772	119,783	143,316	68,497	94,752	107,200	2,354,990
December:	Month	20,276,950	17,882,908	19,753,591	3,664,156	4,266,189	2,018,734	2,658,301	3,313,000	73,823,829
	Daily average	654,095	576,868	637,212	117,876	137,619	65,120	85,752	106,871	2,381,414
1927—										
January:	Month	20,184,872	19,035,426	18,605,363	3,769,879	4,076,469	1,905,570	2,620,303	3,332,500	73,530,382
	Daily average	651,125	614,046	600,173	121,609	131,499	61,470	84,203	107,500	2,371,948
February:	Month	17,982,711	19,752,348	16,483,712	3,352,076	3,574,256	1,784,104	2,385,135	3,007,200	68,321,543
	Daily average	642,240	705,441	588,704	119,717	127,652	63,718	85,183	107,400	2,440,057
March:	Month	19,835,724	22,480,921	18,232,617	3,675,143	3,853,926	2,032,982	2,476,798	3,335,800	75,923,966
	Daily average	639,862	725,191	588,149	118,553	124,320	65,580	79,574	105,100	2,449,158
April:	Month	19,493,825	22,208,130	17,801,140	3,516,930	3,378,240	1,994,330	2,615,770	3,474,000	74,482,365
	Daily average	648,870	740,271	593,371	117,231	112,608	66,491	87,193	115,800	2,482,745
May:	Month	19,506,054	23,258,463	19,539,083	3,704,314	3,493,669	1,935,175	2,742,588	3,467,000	77,646,346
	Daily average	629,238	750,273	630,293	119,494	112,699	62,425	88,471	111,839	2,504,721
June	Month	19,181,442	22,830,330	18,399,810	3,437,580	3,365,760	1,880,820	2,592,437	3,330,000	76,018,179
	Daily average	639,381	761,011	613,327	114,586	112,192	62,694	86,414	111,000	2,500,606
July:	Month	19,319,021	26,522,546	17,607,194	3,454,083	3,406,683	2,279,405	2,635,607	3,373,000	78,597,540
	Daily average	623,194	855,566	567,974	111,422	109,893	73,529	85,020	108,806	2,535,401
	Total 12 months	230,789,819	235,653,457	218,690,744	43,003,783	47,821,225	24,323,169	33,239,966	39,916,000	873,438,163
	Daily average	632,301	645,626	599,153	117,819	131,017	66,639	91,068	109,359	2,392,981

Fittings

GASO GRAY
IRON TEE



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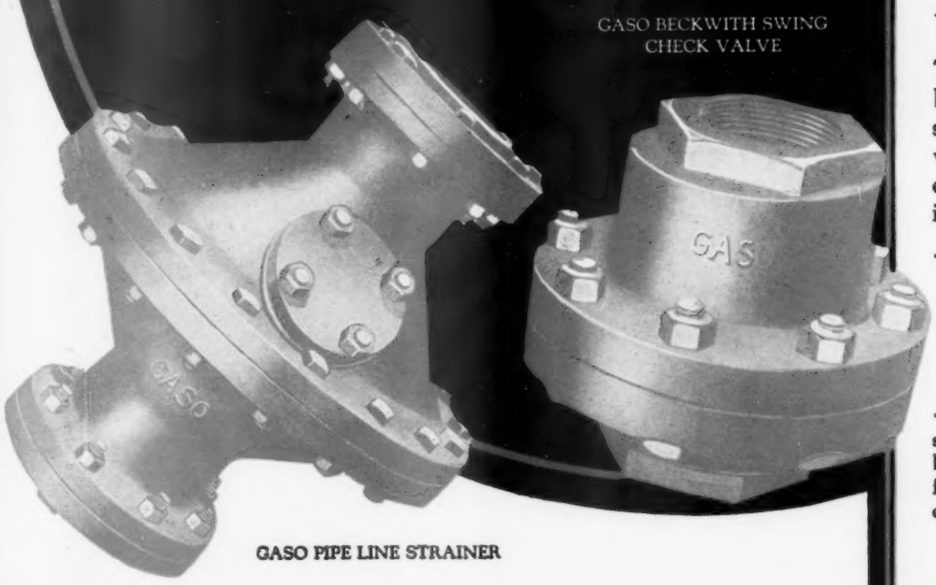

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